Draft Building Code 2020
(Jammu Division)

Town Planning Organization, Jammu
Housing & Urban Development Department
Government of Jammu & Kashmir

Preface

The building code can be broadly divided into three major parts:

i. Framework for dealing with the safety (structural and fire)
ii. Framework for building construction practices and services
iii. Framework for dealing with the spatial planning

Preparation of a uniform building code *ab initio* for any state/UT is a difficult proposition. Bureau of Indian Standards has issued the National Building Code 2016 (NBC). The UT can use NBC in its latest version for ensuring the safety aspects in the building permit as well as building construction process. The logical trajectory is to keep the safety related part of the code uniform adopting NBC-2016 and have Development Control Regulation/ Building Byelaws nuanced to the geographical and other parameters in the UT.

Government of India has issued advisories to all the states for the implementation of the code. In Jammu and Kashmir, the Department of Disaster Management, Relief, Rehabilitation and Reconstruction has issued advisory to departments for the implementation of National Building Code 2016 to ensure the safety of the buildings which are being constructed both in private as well as public sector.

The National Building Code 2016 is divided into 13 parts some of which are further divided into sections totalling 33 chapters. The details are:

1. Part 0 Integrated Approach — Prerequisite for Applying Provisions of the Code.
2. Part 1 Definitions.
3. Part 2 Administration.
4. Part 3 Development Control Rules and General Building Requirements.
5. Part 4 Fire and Life Safety.
6. Part 5 Building Materials.
7. Part 6 Structural Design
8. Part 7 Construction Management, Practices and Safety.
9. Part 8 Building Service.
10. Part 9 Plumbing Services (Including Solid Waste Management.
11. Part 10 Landscape Development, Signs and Outdoor Display Structures
12. Part 11 Approach to Sustainability.
13. Part 12 Asset and Facility Management

Two sets of building byelaws had been framed for Jammu Region by the expert committee with following members: Chief Town Planner Jammu, Vice Chairman JDA, Commissioner Jammu Municipal Corporation. This included:

- Building byelaws for JMC

- Building byelaws for municipal councils/committees

The building bye laws for JMC continued to be implemented till the revised Master Plan of Jammu was notified in 2017. After the notification of Jammu Master Plan, the building bye laws provided in the Master Plan are being implemented.

In the case of other municipalities, the building bye laws formulated by expert committee were issued by Housing & Urban Development Department and had to be notified by the individual municipal council/committees.

Master Plans of Udhampur and Katra have been notified and building bye laws provided in these Master Plan are being implemented by the respective development authorities/municipalities. Draft Master Plan for Kathua local area has also been notified for objections and suggestion and will be notified for implementation in near future.

With the objective of Uniform Building Code, the "Draft Building Code for Jammu Division" has now been framed and the government may adopt the following strategy for notification and implementation:

1. For the municipalities/municipal corporation notified under the J&K Municipal Act 2000/J&K Municipal Corporation Act 2000, the building code may be notified for implementation in their respective jurisdictions.
2. Issue notification for the implementation of the National Building Code for safety, building construction practices and services of the buildings excluding the Part 3 of NBC 2016 framework for development control rules and general building requirements which have been framed specifically framed for the Jammu Division in the uniform building code.
3. The UT has already undertaken comprehensive multi-hazard risk assessment studies, river morphology studies and the disaster resilient building code under the World Bank funded Jhelum and Tawi Flood Recovery Project which will generate a huge volume of data including the Hazard Risk Vulnerability Atlas. All these studies will inform the building code process.
4. The scientific foundation for the building code is in continuous flux, so are the cities and towns, hence the building code cannot be static. In order to ensure that the building code remains dynamic the code needs to be updated and revised at least after every two years.
5. The Government may constitute a committee which will be responsible for the continuous updation of the Building Code

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Chief Town Planner

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Chapter – 1

TERMINOLOGY

1.1 Short title and Commencement

a) These building regulations may be called the Building Code 2020-Jammu Division for Municipal Corporation/ Municipalities of Jammu Division under the provisions of Jammu & Kashmir Municipal Act, 2000/Jammu and Kashmir Municipal Corporation Act, 2000.

b) The building code shall extend to the areas falling within the territorial limits of municipal limits if the development authorities and Jammu Metropolitan Region Development Authority adopt the code.

c) The adoption of the building code by the Panchayat Raj institutions/Rural Development with necessary changes will make the application of the code universal.

1.2 Terminology

For the purpose of this Code the following definitions shall apply.

1.2.1 Advertising Sign

Any surface or structure with characters, letters or illustrations applied there to and displayed in any manner whatsoever out of door for the purpose of advertising or giving information regarding or to attract the public to any place, person, public performance, article, or merchandise and which surface or structure is attached to, form part of, or is connected with any building or is fixed to a tree or to the ground or to any pole screen, fence or hoarding or displayed in space, or in or over any water body included in the jurisdiction of the concerned Authority.

1.2.2 Air-Conditioning

A process of treating air to control simultaneously its temperature, humidity, cleanliness and distribution to meet the requirement of an enclosed space.

1.2.3 Alley means a public thoroughfare which affords only a secondary means of access to abutting property and not intended for general traffic circulation.

1.2.4 Apartment - The building will be called apartment house when the building is arranged/intended/designed to be occupied by the families independent of each other and with independent cooking facility for the purpose of sale/lease/rent to person.

1.2.5 Access - A clear approach to a plot or a building.

1.2.6 Accessory Use - Any use of the premises subordinate to the principal use and customarily incidental to the principal use.

1.2.7 Alteration - A change from one occupancy to another, or a structural change, such as an addition to the area or height, or the removal of part of a building, or any change to the structure, such as the construction of, cutting into or removal of any wall, partition, column, beam, joist, floor (including a mezzanine floor) or other support, or a change to or closing of any required means of ingress or egress or a change to the fixtures or equipment.

1.2.8 Approved - Approved by the Authority having jurisdiction.

1.2.9 Authority Having Jurisdiction -The Authority which has been created by a statute and which for the purpose of administering the Code/Part may authorized committee or an official to act on its behalf; hereinafter called the 'Authority'.

1.2.10 Back-to-Back Cluster - Clusters when joined back to back and/or on sides.

1.2. 11 Balcony- Horizontal projection, with a handrail or balustrade or a parapet, to serve as passage or sitting out place.

1.2.12 Basement or Cellar -The lower storey of a building below or partly below ground level.

1.2.13 Barsati - A habitable room/ rooms on the roof of the building with or without toilet/ kitchen.

1.2.14 Bazaar – means a place or are a reserved or licensed by the Authority for the erection of shops or stalls or both.

1.2.15 Building code - All the applicable chapters of National Building code and this document will together be referred as the Building code. The details of applicability have been inter alia given in chapter 13 of the 'Building Regulations.'

1.2.16 Building Regulations - This document containing fourteen chapters will hereinafter be referred as the 'Building Regulations.'

1.2.17 Building - Any structure for whatsoever purpose and of whatsoever materials constructed and every part thereof. Whether used as human habitation or not and includes foundation, plinth, walls, floors roofs, chimneys, plumbing and building services, fixed platforms, veranda, balcony, cornice or projection, part of a building or anything affixed

thereto or any wall enclosing or intended to enclose any land or space and signs and outdoor display structures .Tents, Shamianahs, tarpaulin shelters, etc., erected for temporary and ceremonial occasions with the permission of the Authority shall not be considered as building.

1.2.18 Building, Height of - The vertical distance measured in the case of flat roofs, from the average level of the abutting road and contiguous to the building or as decided by the Authority to the terrace of last liveable floor of the building adjacent to the external walls; and in the case of pitched roofs, up to the point where the external surface of the outer wall intersects the finished surface of the sloping roof; and in the case of gables facing the road, the mid-point between the eaves level and the ridge. Architectural features serving no other function except that of decoration shall be excluded for the purpose of measuring heights.

1.2.19 Building Envelope - The horizontal spatial limits up to which a building may be permitted to be constructed on a plot.

1.2.20 Building Line -The line up to which the plinth of a building adjoining a street or an extension of a street or on a future street may lawfully extend. It includes the lines prescribed, if any, in any scheme. The building line may change from time to time as decided by the Authority.

1.2.21 Built Area - means area covered immediately above the plinth level and the external area of upper floor.

1.2.22 Building Byelaws:
Chapters 3 and 4 will henceforth be referred as building byelaws.

1.2.23 Cabin - A non-residential enclosure constructed of non-load bearing partition.

1.2.24 Canopy - A projection over any entrance.

1.2.25 Carpet Area - The covered area of the usable rooms at any floor level (excluding the area of the wall).

1.2.27 Chajja - A sloping or horizontal structural overhang usually provided over openings on external walls to provide protection from sun and rain.

1.2.28 Chimney - An upright shaft containing one or more flues provided for the conveyance to the outer air of any product of combustion resulting from the operation of heat producing appliance or equipment employing solid, liquid or gaseous fuel.

1. 2.29 Ceiling height - means the vertical distance between the floor and the ceiling, where a finished ceiling is not provided, the underside of the joists or top of post plate in case of pitched roof shall determine the upper point of measurement.

1.2.30 Commercial Building - means a building used as shop, store, market, money transaction, sale and purchase of goods either wholesale or retail, storage, godown or any other activities carried in furtherance of trade and commerce.

1.2.31 Clinic- means a premise with facilities for treatment of outdoor patients by a doctor.

1.2.32 Clinical laboratories - means a premise with facilities for carrying out various tests for the confirmation of symptoms of a disease.

1.2.33 Conversion of Building means:

(a) Conversion of building or any part of for human habitation from one dwelling house into more than one dwelling house or vice versa.

(b) Conversion of a building or part thereof into a shop, warehouse or factory or vice versa.

(c) Change of a building use or one intended to be used for purposes, such as shop, warehouse or light industry etc., used for any other purpose.

1.2.34 Chowk or Courtyard - A space permanently open to the sky, enclosed fully or partially by building and may be at ground level or any other level within or adjacent to a building.

1.2.35 Chowk. Inner - A chowk enclosed on all sides.

1.2.36 Chowk Outer - A chowk one of whose sides is not enclosed.

1.2.37 Closed Clusters - Clusters with only one common entry into cluster open space.

1.2.38 Cluster - Plots or dwelling units or housing grouped around an open space ideally housing cluster should not be very large. In ground and one storeyed structures not more than 20 houses should be grouped in a cluster. Clusters with more dwelling units will create problems in identity, encroachments and of maintenance.

1.2.39 Cluster Court Townhouse - A dwelling in a cluster plot having 100 percent or nearly 100 percent ground coverage with vertical expansion, generally limited to one floor only and meant for self-use.

1.2.40 Cluster Plot - Plot in a cluster.

1.2.41 Cooking Alcove - A cooking space having direct access from the main room without any inter- communicating door.

1.2.42 Covered Area - Ground area covered by the building immediately above the plinth level. The area covered by the following in the open spaces is excluded from covered area.

a) Garden, rockery, well and well structures, plant nursery, water pool, swimming pool (if uncovered), platform round a tree, tank, fountain, bench, Chabutra with with open top and unenclosed on sides by walls and the like;

b) Drainage culvert conduit, catch-pit, gully pit, chamber, gutter and the like;

c) Compound wall, gate, unstoreyed porch and portico, canopy, slide, swing, uncovered staircase, ramps areas covered by Chhajja and the like; and

d) Watchmen's booth, pump house, garbage shaft, electric cabin or sub-stations, and such other utility structures meant for the services of the building under consideration.

Note*- For the purpose of this Part, covered area equals the plot area minus the area due for open spaces.*

1.2.43 'Cul-de-Sac' Cluster

Plots/dwelling units when located along a pedestrianized or vehicular 'cul-de-sac' road.

1.2.44 Density - The residential density expressed in terms of the number of dwelling units per hectare.

Note - *Where such densities are expressed exclusive of community facilities and provision of open spaces and major roads (excluding incidental open spaces), these will be net residential densities. Where these densities are expressed taking into consideration the required open space provision and community facilities and major roads. These would be gross residential densities at neighbourhood level. Sector level or town level, as the case may be. The provision of open spaces and community facilities will depend on the size of the residential community.*

Incidental open spaces are mainly open spaces required to be left around and in between two buildings to provide lighting and ventilation.

1.2.45 Detached Building - A building detached on all sides.

1.2.46 Development - 'Development' with grammatical variations means the carrying out of building, engineering, mining or other operations, in, or over, or under land or water, on the making of any material change, in any building or land, or in the use of any building, land, and includes redevelopment and layout and subdivision of any land; and to develop' shall be construed accordingly.

1.2.47 Drain - A conduit, channel or pipe for the carriage of storm water, sewage, waste water or other water borne wastes in a building drainage system.

1.2.48 Drainage - The removal of any liquid by a system constructed for the purpose.

1.2.49 Dwelling Unit/Tenement - An independent housing unit with separate facilities for living, cooking and sanitary requirements.

1.2.50 Escalator - A power driven, inclined, continuous moving stairway used for raising or lowering passengers.

1.2.51 Exit - A passage, channel or means of egress from any building, storey or floor area to a street or other open space of safety.

1.2.52 External Faces of Cluster - Building edges facing the cluster open spaces.

1.2.53 Floor - The lower surface in a storey on which one normally walks in a building. The general term 'floor' unless specifically mentioned otherwise shallot refer to a 'mezzanine floor'.

1.2.54 Floor Area Ratio (FAR) -The quotient obtained by dividing the total covered area (plinth area) on all floors by the area of the plot:

$$\text{F.A.R.} = \frac{\text{Total covered area of all floors}}{\text{Plot area}} \times 100$$

1.2.55 Filling station- means an area of land including any structures thereon that is or are used or designed to be used for the supply of gasoline or oil or fuel for the propulsion of vehicles. For the purpose of these building regulations these shall be deemed to be included

within this term, any area or structure used designed to be used for polishing, greasing, and washing, spraying or otherwise cleaning or servicing such motor vehicles.

1.2.56 Foundation - The part of the structure, which is in direct contact with ground and transmits load over it.

1.2.57 Gallery - An intermediate floor or platform projecting from a wall of an auditorium or a hall providing extra floor area, additional seating accommodation etc. It shall also include the structures provided for seating in stadia.

1.2.58 Garage Private - A building or a portion thereof designed and used for parking of private owned motor driven or other vehicles.

1.2.59 Garage Public - A building or portion thereof other than a private garage designed or used for repairing, servicing, hiring, selling or storing or parking motor driven or other vehicles.

1.2.60 Group Housing - Housing for more than one dwelling unit, where land is owned jointly (as in the case of cooperative societies or the public agencies, such as local authorities or housing boards, etc.) and the construction is undertaken by one Agency.

1.2.61 Group Open Space - Open space within a cluster. Group open space is neither public open space nor private open space. Each dwelling unit around the cluster open space have ashore and right of use in it. The responsibility for maintenance of the same is to be collectively shared by all the dwelling units around.

1.2.62 Habitable Room - A room occupied or designed for occupancy by one or more persons for study, living, sleeping, eating, and kitchen if it is used as a living room, but not including bathrooms, water-closet compartments, laundries, serving and store pantries, corridors, cellars, attics, and spaces that are not used frequently or during extended periods.

1.2.63 Heritage Building - means any building of one or more premises or any part there of which requires preservation, restoration and conservation for historical, architectural, environmental, cultural or religious purpose and includes such portion of the land adjoining such buildings as may be required.

1.2.64 Heritage Zone - means the area around such heritage building as delineated under Jammu and Kashmir Heritage and Conservation and Preservation Act, 2010 from time to time for restricting the height of building and use of building. The areas coming under different ASI sites including the buffers will also be treated as heritage zone.

1.2.65 Hotel - means a building or apart of the building used as boarding place for more than 24 persons who are lodged with or without meals, at a time.

1.2.66 Independent Cluster - Clusters surrounded from all sides by vehicular access roads and/or pedestrian paths.

1.2.67 Interlocking Cluster - Clusters when joined at back and on sides with at least one side of a cluster common and having some dwelling units opening onto or having access from the adjacent clusters. Dwelling units in such clusters should have at least two sides open to external open space. Houses in an interlocking cluster may have access, ventilation and light from the adjacent cluster and should also cater for future growth.

1.2.68 Internal Faces of Cluster - Building edges facing the adjacent cluster open space (as in case of interlocking cluster) of the surrounding pedestrian paths or vehicular access roads.

1.2.69 Industrial Building - means a building, which is wholly or predominantly used as a warehouse or for Manufacturing/assembling, processing activity or distillery.

1.2.70 Ledge or Taakh - A shelf-like projection, supported in any manner whatsoever, except by means of vertical supports within a room itself but not having projection wider than 1m.

1.2.71 Lift - An appliance designed to transport persons or materials between two or more levels in a vertical or substantially vertical direction by means of a guided car or platform. The word ‘elevator’ is also synonymously used for 'lift'.

1.2.72 Loft - A structure providing intermediate storage space in between two floors with a maximum height of 1.5 m, without having a permanent access.

1.2.73 Masterplan - A master plan formulated under any relevant act (**J&K Development Act 1970, J&K Municipal Act 2000**) for any town, approved and notified by the UT Government.

1.2.74 Mezzanine Floor - An intermediate floor between two floors of any storey forming an integral part of floor below.

1.2.75 Occupancy or Use Group - The principal occupancy for which a building or a part of a building is used or intended to be used; for the purposes of classification of a building according to occupancy; an occupancy shall be deemed to include subsidiary occupancies which are contingent upon it.

1.2.76 Occupancy, Mixed - A multiple occupancy where the occupancies are intermingled.

1.2.77 Open Clusters - Clusters where cluster open spaces are linked to form a continuous open space.

1.2.78 Open Space - An area, forming an integral part of the plot, left open to the sky.

Note *-The open space shall be the minimum distance measured between the front, rear and side of the building and the respective plot boundaries.*

1.2.79 Open Space, Front - An open space across the front of a plot between the building line and front boundary of the plot.

1.2.80 Open Space, Rear - An open space across the rear of a plot between the rear of the building and the rear boundary of the plot.

1.2.81 Open Space, Side - An open space across the side of the plot between the side of the building and the side boundary of the plot.

1.2.82 Owner - A person, a group of persons or a body having a legal interest in land and/or building thereon. This includes free holders, leaseholders or those holding a sublease, who will have a legal right to occupation and have liabilities in respect of safety or building condition. In case of lease or sublease holders, as far as ownership with respect to the structure is concerned, the structure of a flat or structure on a plot belongs to the allotted/ lessee till the allotment/lease subsists.

Note *- For the purpose of the Code, the word 'owner' will also cover the generally understood terms like 'client', 'user ', etc.*

1.2.83 Parapet - A low wall or railing built along the edge of a roof or floor.

1.2.84 Parking Space - An area enclosed or unenclosed, covered or open, sufficient in size to park vehicles, together with a drive-way connecting the parking space with a street or alley and permitting ingress and egress of the vehicles.

1.2.85 Partition - An interior non-load bearing barrier, one storey or part-storey in height.

1.2.86 Plinth -The portion of a structure between the surface of the surrounding ground and surface of the floor, immediately above the ground.

1.2.87 Plinth Area -The built up covered area measured at the floor level of the basement or of any storey.

1.2.88 Porch - A covered structure supported on pillars or otherwise for the purpose of pedestrian or vehicular approach to a building.

1.2.89 Polyclinic- means an institution where patients are clinically examined by one or more doctors for treatment of disease and where patients are treated but not admitted as indoor patients as is the case with hospitals and nursing homes. It can have basic diagnostic facilities.
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1.2.90 Public Building - means a Building owned or used by Govt. or Semi Govt. Authority, Public registered Trust or such board/foundation which runs and manages charitable institution like hospitals, educational institutions and religious institutions. It shall also include places of Worship like Mosque, Temple, Gurudwara, Church etc.

1.2.91 Road - **See** 'Street'.

1.2.92 Road Line - **See** 'Street Line'.

1.2.93 Room Height - The vertical distance measured from the finished floor surface to the finished ceiling surface. Where a finished ceiling is not provided, the underside of the joists or beams or tie beams shall determine the upper point of measurement.

1.2.94 Row Housing/Row Type Building - A row of buildings, with only front, rear and interior open spaces, where applicable.

1.2.95 Residential Building - means a building used for human habitation and includes all garages, stables or other building apartment/hostels thereto.

1.2.96 Registered technical personnel (RTP) - will mean qualified person/persons as Architect/ Engineer/ Planner/ Group of technical personnel/ Supervisor/ Plumber/Electrician who has been enrolled/licensed by the Competent Authority.

1.2.97 Semi-Detached Building - A building detached on three sides.

1.2.98 Service Road/Lane - A road/lane provided adjacent to a plot(s) for access or service purposes as the case may be.

1.2.99 Set-Back Line - A line usually parallel to the plot boundaries and laid down in each case by the Authority, beyond which nothing may be constructed towards the plot boundaries.

1.2.100 Site (Plot) - A parcel (piece) of land enclosed by definite boundaries.

1.2.101 Site, Corner - A site at the junctions of and fronting on two or more intersecting streets.

1.2.102 Site, Depth of-The mean horizontal distance between the front and rear site boundaries.

1.2.103 Site, Double Frontage - A site, having a frontage on two streets, other than a corner plot.

1.2.104 Site, Interior or Tandem - A site access to which is by a passage from a street whether such passage forms part of the site or not.

1.2.105 Stair cover (or Mounty) - A structure with a roof over a staircase and its landing built to enclose only the stairs for the purpose of providing protection from weather and not used for human habitation.

1.2.106 Storey – The portion of building included between the surface of any floor and the surface of the floor next above it, or if there be no floor above it, then the space between any floor and the ceiling next above it.

1.2.107 Storey, Topmost - The uppermost storey in a building whether constructed wholly or partly on the roof.

1.2.108 Street - Any means of access, namely, highway, street, lane, pathway, alley, stairway, passageway, carriageway, footway, square, place or bridge, whether thoroughfare or not, over which the public have a right of passage or access or have passed and had access uninterruptedly for a specified period, whether existing or proposed in any scheme, and includes all bunds, channels, ditches, storm-water drains, culverts, footpaths, sidewalks, traffic islands, roadside trees and hedges, retaining walls, fences, barriers and railings within the street lines.

1.2.109 Street Level or Grade -The officially established elevation or grade of the central line of the street upon which a plot fronts and if there is no officially established grade, the existing grade of the street at its mid-point.

1.2.110 Street Line - The line defining the side limits of a street.

1.2.111 To Erect - To erect a building means,

a) To erect a new building on any site whether previously built upon or not; and

b) To re-erect any building of which portions above the plinth level have been pull down, burnt or destroyed.

1.2.112 Tower - Like Structures - Structures shall be deemed to be tower-like structures when the height of the tower-like portion is at least twice the height of the broader base at ground level.

1.2.113 Verandah - A covered area with at least one side open to the outside with the exception of l m high parapet on the upper floors to be provided on the open side.

1.2.114 Volume to Plot Area Ratio (VPR) - The ratio of volume of building measured in cubic meter to the area of the plot measured in square meter, and expressed in meter.

1.2.115 Ventilation – shall mean the supply of outside air into a building through window or other openings due to wind outside and convection effects arising from temperature, or vapour pressure differences (or both) between inside and outside of the building.

1.2.116 Water Closet - A water flushed plumbing fixture designed to receive human excrement directly from the user of the fixture. The term is used sometimes to designate the room or compartment in which the fixture is placed.

1.2.117 Window - An opening to the outside other than a door, which provides all or part of the required natural light or ventilation or both to an interior space.

1.2.118 Warehouse - means a building, the whole or substantial part of which is used or intended to be used for the storage of goods but does not include a store room attached to and used for the proper functioning of a shop.

1.2.119 Workshop - means a building where not more than ten persons are employed in any repair /servicing or manufacturing process.

1.2.120 Zonal plan – A plan detailing out the proposals of Master Plan and acting as a link between Master Plan and the layout plan. It may contain a site plan and land use plan, with approximate location and extent of land uses, such as public and semi-public buildings/ works utilities, roads, housing, recreation, industry, business, markets, schools, hospitals open spaces etc. It may also specify standards of population density and various components of development of the zone. The zone has the same connotations as provided under **J&K Development Act 1970**.

1.2.121 Zone– means any division in which local areas is divided for purpose of development.

Chapter - 2

PROCEDURE FOR OBTAINING BUILING PERMISSION

2.1 Notice

Every person who intends to erect, re-erect or make alteration in any place in a building or demolish any building or any part thereof shall give notice in writing to the Commissioner, JMC/Chief Executive Officer/ Executive Officer, Municipality of his/her intention in **Appendix-A.**

2.2 Documents and Drawings

2.2.1 Documents Required for Development Permission:

i) Application for Obtaining/Revising a Development Permission

ii) Receipt of Scrutiny Fees paid to the Competent Authority

iii) Legal document of the Right to develop or Build on the subject property/land, including original copies of the relevant extract from the Property Register for City Survey Lands or Record of Rights for Revenue Lands as applicable.

iv) Certified copy of approved sub-divisions or layout of the final plot from the concerned Authority as the case may be showing:

a. City Survey No. or Revenue No.
b. Area and Measurements of the Plot (Concerned Authority may dispense with this requirement in the cases where it is satisfied regarding the ownership of land on the basis of any documentary evidence or proof produced by the applicant)

v) Copy of Sanctioned Layout including date of sanction and Reference No. (In case of Plotted Development)

vi) Area statements for Building Area, FAR Area, Parking Area, etc. as required

vii) Calculation Statement for Development Permission Fees, and other such fees as the case may be, payable to the Authority

viii) Photographic Identity Proof of the Owner and Applicant

ix) Photographs of the subject Plot

x) Certificates, NOC, opinions, documents as may be required by competent authority

2.3 Drawings to be submitted for Development Permission:

I) Key Plan

A key plan shall be drawn not to the scale and shall explain the boundary and location of the site with respect to neighbourhood landmarks.

II) Site Plan (Suitable & Readable Scale)

a. Boundaries of the plot and of any contiguous plots belonging to the Owner;
b. Position of the plot in relation to the neighbouring streets and street names;
c. Direction of north point relative to the plan of buildings;
d. Building Unit level in relation to the neighbouring street level;
e. Building number or Plot No. of the plot on which the building is intended to be erected;
f. All existing buildings standing on, over or under the plot;
g. Any existing natural or manmade physical features, such as wells, drains, trees, high tension line, gas pipeline, railway line, etc.
h. Proposed use of every building
i. The position of building(s) and construction which the applicant intends to erect in relation to:
    i) The boundaries of the plot and in case where the plot has been partitioned, the boundaries of the portion owned by the applicant and also of the portions owned by others;
    ii) All buildings (with number of stories and height) and premises adjacent to the plot and of the contiguous land, if any, referred to in (a); and;
    iii) Any street prescribed under the Act and passing through the Building-unit/s clearly indicating the regular line of streets;
    iv) The area within the regular line of the street not to be built upon but to be added to the street, hatched in green together with its measurements;
    v) Building lines and margins of streets
j. The width and level of the street in front, and of the street, if any, at the side or rear of building clearly indicating the regular line of streets;
k. The means of access from the street to the site and all existing and proposed buildings;
l. Open space to be left around the building to secure free circulation of air, admission of light and access;
m. Open space to be provided under these Development Regulations;
n. The area of the whole plot and the break-up of Total built-up area on each floor;

o. Area classified for exemption of built-up area calculations;
p. Dimensions and areas of common plot, as required under these regulations,
q. Parking layout, indicating the parking spaces, access lane, driveway or ramp;
r. Layout and details of rain water harvesting required under the Development Regulations, if any;
s. The position of every water closet, privy, urinal, bathrooms, cesspool, well or cistern in connection with the building other than those shown in the building plan.
t. The lines of drainage of the building, the size, depth and inclination of every drain and the means to be provided for the ventilation of the drains;
u. The position and level of the outfall of the drain, any existing facilities regarding water supply, sewerage etc., diameter and gradient of water supply line, drainage lines for the disposal of storm water as well as for sewerage.
v. Detailed drawings showing the boundary walls and gates.

III) Landscape Plan (if required, Suitable & Readable Scale)
a. The space for circulation and parking;
b. Paved pathways;
c. Existing trees;
d. Proposed tree plantation;
e. Green areas;
f. Unpaved areas

IV) Building Plan (Suitable & Readable Scale)
a. All floor plans together with the covered area, size and spacing of framing members, size of rooms and the position and width of staircases, ramps and other exit ways, lift wells, lift machine room and lift pit details;
b. Built-up area of each dwelling unit, or shop or office space at every floor level;
c. The use or occupancy of all parts of the building;
d. Exact location of essential services, like W.C., sink, bathroom, kitchen, cesspool, water tank, cistern, etc.
e. Section drawings showing the heights of building and rooms and also the height of the parapet, and underground construction (if any).
f. Levels of the site and all floors in relation to the datum or crown level of the access street;
g. All elevations;
h. Details of service privy, if any;
i. Dimensions of the projected portions beyond the permissible building line;
j. Terrace plan including cabin structure;
k. Parking spaces provided and the parking layout;
l. Direction of north point relative to the plan of buildings;
m. Such other particulars as may be required to explain the proposed building clearly.

n. Provision of water harvesting, location of solar panels, location of STPs/ ETPs, location of underground water tanks, location of security guard room & office, and site drainage in case of all major projects.

***Note**: Approving authority can ask for drawings on particularly scale for scrutiny.*

2.4 Signing the Plans:

I. All building and other related plans shall be signed by the owner(s); and

II. Architects holding valid registration with council of Architecture.

All layout plans for plotted development shall be signed by the owner(s) and by one of the following:

I. Town Planners holding valid registration with the Institute of Town Planners, India;
Or

II. Architects holding a valid registration with the Council of Architecture for Layout Plans of plots on land measuring less than 1 ha.

2.5 Responsibilities of Owner:

The Owner shall:

- Be responsible for ensuring that the building compliances with building code.
- Shall make the application for a Building Permit.
- Appoint a Construction Engineer on Record to certify that the construction of the building has been undertaken as per detailed design and specifications stipulated by the R.T.P. and the Structural Engineer on Record.
- Appoint independent Structural Engineer on Record to undertake third-party verification of the structural design and specifications of the proposed building and, to verify and certify that the design and specifications comply with these building Bye-Laws.
- Inform the authority in writing within 7 working days if for any reason he ceases to be the Owner of the plot for which the Building Permit has been issued or granted, regardless of whether building has commenced or not.
- Inform the authority in writing within 7 working days if for any reason, any of the Persons on Record appointed by him have been relieved of their responsibilities.
- Ensure that no construction is undertaken during the period that the Building Permit has lapsed or has been revoked.
- Submit Maintenance Certificates as required by authority from time to time.
- No ownership of a plot or building shall be changed or transferred by whatsoever means before issuance of Building Use Permit except with prior permission of authority. If the ownership has been changed without prior permission of authority, the building permit issued by the competent authority shall be deemed to have been

revoked. This shall also apply to building under construction. The authority shall charge the fee it deems fit for change of ownership. However, the authority may on application by prospective owner, issue building use permit subject to payment of penalty of Rs. 10000/- if it is satisfied that the building is in conformity with the design and specifications as approved by the competent authority.

2.6 Minimum Qualifications and Competence Requirements:

The authority shall list advocates, architects, structural engineers and Construction Engineers /Electric Engineers as Advocates on Record (AdOR), Architects on Record (AOR), Structural Engineers on Record (SEOR), Electric Engineers on Record (EEOR) and Construction Engineers on Record (CEOR), Electrical Engineers on Record (EEOR) respectively. Applications for listing should be made in the format prescribed by the Competent Authority from time to time etc.

The Competent Authority shall determine minimum qualifications and competence requirements for being considered for listing as Persons on Record from time to time.

Accreditation:

The UT shall work towards the accreditation of the professionals like civil engineers, structural engineers, town planners, construction engineers ensuring uniform certification process.

2.6.1 Listing Fee and Security Deposit:

Listing Fee and Security Deposit for listing, as Persons on Record with the Competent Authority shall be determined by the authority.

2.7 Penalties:

Procedures for ascertaining whether a Person on Record has failed in discharging his responsibilities in the context of these Building Bye-Laws shall be determined by the Competent Authority etc. Penalties for failing to discharge responsibilities shall also be determined by the authority.

2.8 Responsibilities of Persons on Record:

Responsibilities of Persons on Record shall be as follows:

2.8.1 Structural Engineer on Record (SEOR):

The Structural Engineer on Record shall:

- Scrutinize and verify the structural design and specifications of the proposed building.

- Certify and ensure that earthquake resistance features annexed as schedule have been incorporated followed during the construction process.
- Certify that the structural design and specification of the proposed building comply with Building Bye-Laws.
- Immediately inform the Authority in writing, if in his opinion, construction of the building is not being undertaken in accordance with the structural design and specifications stipulated by him.
- Inform the Authority in writing, within 7 working days, if for any reason he is relieved of his responsibilities as the Structural Engineer on Record for the building.

2.8.2 Construction Engineer on Record (CEOR):

The Construction Engineer on Record shall:

- Undertake all necessary measures, including but not limited to adequate inspection during construction to ensure that the construction of the building is undertaken as per detailed design and specifications stipulated by the R.T.P. and by the Structural Engineer on Record;
- Provide an undertaking to the Authority along with the Notice of Commencement of Construction, that the construction of the building shall be undertaken as per detailed designs and specifications stipulated by the R.T.P. and by the Structural Engineer on Record.
- Certify to the authority, at stages prescribed in Building Bye-Laws that the construction of the building has been carried out as per detailed design and specifications provided by the R.T.P. and Structural Engineer on Record.
- Immediately inform the authority in writing, if construction of the building is not being undertaken in accordance with the design and specifications stipulated by the AOR and the SEOR.
- Inform the Authority in writing, within 7 working days, if for any reason he is relieved of his responsibilities as the Construction Engineer on Record for the building.

2.9 Building Permit to Lapse with Change in Persons on Record:

- The Architect on Record, the Structural Engineer on Record and the Construction Engineer on Record, based on whose respective certifications the Building Permit has been issued or granted, are respectively responsible for ensuring that construction of the building is in compliance with these Building Bye-Laws.
- After the Building Permit is issued or granted, if any of the Persons on Record is relieved of his responsibility by the Owner, or, relieves himself of

responsibility of the building, the Building Permit shall lapse regardless of whether the construction of the building has commenced or not. In such an event a Revalidated Building Permit may be applied for.

2.10 Revocation of Building Permit in case of Misrepresentation and De-listing of Person on Record:

The Competent Authority may revoke a Building Permit if:

- It determines that false statements were made or material facts were misrepresented for obtaining the Building Permit

- The Person on Record, based on whose certification the Building construction is carried out is de-listed by the Authority.

2.11 Standard Building Plans:

In case of standard building plans prepared by the Housing Board, Development Authority, Housing cooperatives or any other authorized agency for any approved housing colony or township and such standard plans have also been approved by the Municipality, the same shall be verified and approved by Town Planning Organization Jammu/Kashmir as the case may be.

2.12 Qualifications for Architects, Engineers, Town Planners and Structural Engineers.

1. Architect

The minimum qualification for an Architect shall be the qualification as provided in the Architects Act, 1972 for registration with Council of Architecture.

2. Town Planner

The minimum qualification for a town planner shall be graduate or post-graduate degree in town and country planning or its equivalent degree as recognized by AICTE and the membership of the Institute of Town Planner, India is desirable.

3. Engineer

The minimum qualification for an engineer shall be graduate in civil engineering of recognized Indian or foreign university or the corporate member of civil engineering division of the Institution of Engineers (India).

4. Structural Engineer

The minimum qualification for structural engineer shall be graduate in civil engineering of recognized Indian or foreign university or the corporate member

of civil engineering division of the Institutions of Engineers (India) and with minimum 3 years' experience in structural engineering practice with designing and field work.

***Note**: The 3 years' experience need not be inserted in the case of post graduate degree or doctorate of recognized Indian or foreign university in the branch of structural engineering.*

Self-build Homes

The UT/Local body can create by notification a set of rules for the certification of the self-build homes.

High Rise Buildings

For high rise buildings the peer review of the structural designs can be allowed due to the paucity of the resources at the local body level.

Chapter – 3

PROCEDURE FOR SANCTIONING OF BUILDING PLANS

3.1 Consultation with concerned agencies:

a) After an application for erection, re-erection or alteration of a building has been received, the Chief Executive Officer/Executive Officer shall immediately forward a copy of the plans to the Engineering and Urban Environmental Engineering Departments and to the District Town Planner of the Town Planning Organization for their clearance with or without condition within a period of one week from the receipt of the application from concerned Executive Engineers of the Power Development, Public Health.

b) Wherever necessary the Executive Officer shall also forward a copy of the site plan and the ownership records to concerned Tehsildar for verification of the title of ownership and for a report that the land or its any part thereof does not encroach upon state or forest land. Such a verification report shall be submitted within a period of three weeks.

c) The Executive Officer shall, within a period of two weeks from the date of submission of the application, cause the proposed site of erection or re-erection of the building inspected by the designated officer of the Municipality who in turn shall record his inspection note soon thereafter.

d) All the Departments, to whom the building permission case has been sent, shall give their concurrence by or before three weeks positively. In case the concurrence is refused, reasons for doing be conveyed in writing.

3.2 Building Permission Authority:

(a) The following Building Permission Authority has been constituted for the local area of Municipal Councils and Municipal Committees/Municipal Corporation:

Municipal Corporation

i.	Commissioner	Chairman
ii.	Chief Town Planner/Senior Town Planner (TPOJ)	Member
iii.	Senior Town Planner, JDA	Member
iv.	Senior Town Planner JMC	Member
v.	ACR Revenue	Member

Municipal Council/Committee

i.	Chief Executive Officer/President	Chairman
ii.	Divisional/Asstt. Town Planner of concerned District	Member
iii.	Executive Engineer, PHE	Member

iv.	Executive Engineer, PDD (Inspection Division)	Member
v.	Tehsildar	Member
vi.	Executive Officer	Member Secy.

b) The Authority shall preferably meet once in a fortnight on a fixed date and in case of holiday the said meeting shall be held on a next working day. The date, time and place of the meeting shall be determined by the Chairman of the Authority.

c) The Member secretary shall place before the Authority all the applications for building plan in respect of which necessary clearance and comments have been received from the concerned agencies or no such clearance and comments have been received within the stipulated period and the authority shall deliberate on all such cases.

d) The Authority may either sanction or refuse to sanction the plans or may sanction them with modification or directions as it may deem necessary.

3.3 Time Limit for Permission:

a) The Authority shall communicate the decision of the building permission authority in Form A-1 and Form A-2 to the person giving the notice under regulation 5(a) of the building regulations within a period of 30 days from the date of receipt of the notice.

3.4 Modification of Building Plan:

When a building has been sanctioned by the authority with such modifications as it may deem necessary, the applicant shall modify the plan to comply with the objections raised and submit the modified plans to the authority. The authority shall scrutinize the resubmitted plans and if there are still some objections, those shall be intimated to the applicant for compliance only thereafter the plans shall be sanctioned.

3.5 Validity of Permission and Revalidation:

Once a building permission is sanctioned it shall remain valid initially for three years from the date of sanction and further extendable for two years. The validity period of sanction in case of additions/ alterations shall be two years from the date of sanction. Revalidation shall be subject to the Master Plan/Zonal Plan or Building Regulations, as in force, for the area where construction has not been started and the procedure for revalidation of the building permission has to be the same as required under fresh permission.

3.6 Revocation of Permission;

a. The authority may revoke any building permission issued under the provisions of the building regulations in the following cases wherever there has been any false statement, misrepresentation of material facts in application on which the building permission has been sanctioned.

Or

If during construction it is found that the owner has violated any of the provisions of the sanctioned plan or building regulations.

In such cases fresh sanction of building plans shall be taken by the owner of the building from the Municipality after bringing the building within the framework of sanctioned plan, Master Plan, Zonal Plan, Building Regulations.

Any building permit which has been issued by the Authority before the commencement of the Building Regulations and where construction is in progress and has not been completed within the specified period from the date of such permit, the said permission shall be deemed to be sanctioned under these Regulations and shall only be eligible for revalidation there-under. Accordingly, where the validity of sanction has expired and construction has not commenced, construction shall be governed by the provisions of these Building Regulations.

Chapter – 4

PROCEDURE DURING CONSTRUCTION WORK

4.1 Construction to be in conformity with building code Owners Liability:

Neither the granting of the permission nor the approval of the drawings and specification, nor inspection by the Corporation/Municipality during erection of the building, shall in any way relieve the owner of the building from full responsibility for carrying out work in accordance with the building code.

4.2 Documents at Site:

(a) The person to whom permission has been granted shall during construction keep the following documents readily available at site on demand in respect of building for which the permit was issued.

i. A copy of the building permit;
ii. A copy of the approved drawings and specifications of the property in respect of which the permit was issued.

(b) Where tests of any materials are made to ensure conformity with the requirements of the building regulations, records of test date shall be kept available for inspection during the construction of the building and for such a period thereafter as required by the Authority.

(c) The Authority shall get the site inspected periodically during further construction. A report of each inspection shall be prepared in duplicate as per Form A-6 and a copy of the same duly signed by the designated officer shall be given to the owner or to his Architect/Engineer/ Supervisor.

4.3 Notice of Completion:

Every owner shall submit a notice of completion in Form A-3 to the Municipality regarding completion of the building for which permission has been granted. The notice of completion shall be accompanied by the following documents: -

i. Clearance from Designated Fire Officer, wherever required.
ii. Clearance from Designated Controller of Explosives, wherever required.
iii. Structural stability certificate duly signed by the Structural Engineer for construction wherever required.

4.4 Completion Certificate:

(a) The local authority through their designated officer shall on receipt of the notice of completion get the work inspected on Form A-4 and communicate the approval or refusal or objection thereto in Forms A-5 & A-6 within 30 days from the receipt of notice of completion for residential building and 60 days for other buildings.

(b) In case of commercial buildings more than 200 Sq. mt. plinth area over G+1, the work shall also be subject to the inspection of the Designated Fire Officer, and the Completion certificate shall be issued by the Authority only after the clearance from Designated Fire Officer regarding the completion of work from the fire protection point of view.

4.5 Sewer/ Water/ Electricity Connection:

(a) No permanent connection of the water, sewer line and power shall be given to the building by the concerned agencies unless completion certificate has been issued by the Municipality.

(b) Temporary connection for water, electricity or sewer can be permitted only for the purpose of facilitating the construction. Such temporary connections shall not be allowed to continue in the premises without obtaining Completion certificate. Validity of the temporary connection shall be valid only for a period of one year or completion whichever less is.

4.6 Procedure for obtaining a Building Use Permit:

(a) Notice of Completion of Construction and Application for Building Use Permit:

The Owner shall be responsible for notifying the competent authority of the completion of construction, for certifying that the construction complies with the sanctioned design and specifications, and for applying for grant of a Building Use Permit.

Notice of Completion of Construction, compliance certification and application for Building Use Permit shall be made in the format prescribed by the Authority and shall be accompanied by documents and drawings as prescribed by the Authority.

(b) Building Use Permit for a Building or a part thereof:

The Competent Authority may grant a Building Use Permit for a building or a part thereof. Application for Building Use Permit for a part of a building shall be made using the format prescribed by the Authority and shall be accompanied by documents and drawings as prescribed in the format.

(c) Final Inspection:

Following receipt of the Notice of Completion of Construction, the authority shall undertake final inspection of construction for ensuring compliance to sanctioned design and specifications. The authority shall communicate the date and time of inspection to the Owner within 10 working days of receipt of Notice of Completion of Construction. If, on inspection, the authorities satisfied that the construction of the building complies with the sanctioned design and specifications, he shall grant a Building Use Permit and sanctioned use may be made of the building.

(d) If the construction is found not to comply with sanctioned design and specifications, the authority shall communicate queries regarding the construction and/or directions to ensure compliance to the Owner, within 7 working days of the date of inspection. Failure to comply with directions, as may be issued by the authority may result in revocation of the Building Permit.

(e) Grant/Refusal of Building Use Permit:

If the Authority is satisfied that the construction of the building complies with the sanctioned design and specifications the competent authority shall grant a Building Use Permit and sanctioned use may be made of the building. Reasons for grant/refusal of Building Use Permit shall be communicated to the applicant within 7 working days by the authority.

4.7 Procedure for obtaining permit to change sanctioned use of building

(a) Application:

Application for obtaining Permit to Change Sanctioned Use of Building shall be made by the Owner of the plot.

(b) Scrutiny of Application:

I. The authority shall undertake scrutiny of the Application for Permit to Change Sanctioned Use of Building and communicate to the applicant the date and time for plot/spot inspection, if required within 15 working days of the date of acceptance of the application.

ii. Lack of compliance with Building Regulations and/or queries pertaining to the application shall be communicated within 21 working days of the date of acceptance of the application.

iii. Acceptance or rejection of compliant modifications in the application and responses to queries shall be communicated within 10 working days of receipt of the modifications and responses.

iv. Acceptance or rejection of further compliant modifications in the application and responses to queries shall also be communicated within 10 working days of the receipt of modifications and responses.

(c) Grant or Refusal of Permit to Change Sanctioned Use of Building:

A Permit to Change Sanctioned Use of Building shall be issued to the applicant when the authority is satisfied that the proposed change of use of the building complies with these Building Regulations / Master Plan. Reasons for rejection of application shall be communicated to the applicant for his/her satisfaction.

4.8 Unauthorized use of building:

(a) Use of any building or a part of a building, without a Building Use Permit or in a manner that does not conform with the sanctioned uses or after a Building Use Permit has been revoked, shall be deemed to be unauthorized use of Building.

(b) The Competent Authority may declare the use of any building to be an unauthorized use if it is convinced the building is unsafe for habitation or if its use poses a danger to public health or safety.

4.8.1 Dealing with unauthorized use of Building and unsafe buildings:

(a) If the Competent Authority deems the use of any building or part of a building to be an unauthorized use of Building it shall, by a written notice, require the person making unauthorized use of building to stop the same forth-with.

(b) If unauthorized use is not stopped, the authority may direct the person making such use to be removed from the building and may cause such necessary measures to be taken to ensure that the person does not re-enter the building without written permission of the Competent Authority. The cost(s) of undertaking these measures shall be paid by the said person.

4.8.2 Penalties:

If a use of a building or a part of a building is declared to be unauthorized use solely on account of a Building Use Permit not having been obtained prior to use made of the building or part of a building and if the said use of building is in conformity with master plan and all provisions of Building Regulations, the owner may apply for regularization of a building use permit. Further use of building or part of a building may be undertaken after obtaining a valid Building Use Permit penalty as notified by Competent Authority from time to time for undertaking such unauthorized use of building or part of a building shall be payable before a Building Use Permit is granted by the Competent Authority.

4.9 Reducing inconvenience and ensuring safety during construction:

It shall be the responsibility of the Owner to certify that no building material, building equipment or building debris is stacked, stored, left or disposed of outside the plot for which Building Permit has been granted, on any public street or space. Failure to comply with this Building Regulation may warrant penalties on the owner of the plot.

(I) Barricading the Plot during Period of Construction:

It shall be the responsibility of the Owner to ensure that plot on which construction is being undertaken is adequately barricaded. Specifications for barricading the plot shall be adhered to strictly. Failure to comply with this Building Regulations may result warrant penalties on the owner of the plot for not providing adequate barricading of the plot during Period of Construction.

(ii) No Damage or Undue Inconvenience during Construction:

a. It shall be the responsibility of the Owner to undertake all necessary measures to ensure that no damage is caused to adjoining properties due to construction.

b. It shall also be the responsibility of the Owner to undertake all necessary measures to ensure that no undue inconvenience is caused to the public, due to factors such as noise, dust, smell or vibrations.

c. It shall also be the responsibility of the Owner to undertake all necessary measures to ensure that traffic is not disrupted due to construction.

d. It shall be the responsibility of the Owner to carry out all instructions given in writing by authorized officers of the authority as the case may be to ensure public safety and reduce inconvenience.

e. Failure to comply with these Building Regulations may warrant penalty as prescribed by the Competent Authority for violation of any of the sub-rule of this rule. However, before levy of penalty, an opportunity of being heard shall be provided to owner of the plot.

(iii) Competent Authority Not Liable for Ensuring Safety during Construction:

The Owner shall be responsible for ensuring that all necessary measures for safety for all are taken on site. Grant of Building Permit, Permit to Use Abutting Street for Construction, grant of Building Use Permit for part of a building, or issuing of any instructions to ensure public safety or reduce inconvenience, does not render the authority liable for any injury, damage or loss whatsoever that may be caused to any one in or around the area during the Period of Construction. In all such cases owner shall be wholly and solely responsible.

4.10 Notice for commencement of construction:

The Owner of the building shall notify the authority of his intention to commence construction at least 7 days prior to commencing construction by filing a Notice of Commencement of Construction in the format prescribed by the authority.

CHAPTER – 5

ZONING REGULATIONS/ BUILDING REGULATIONS

5.1 General Landuse framework

All the towns should have a master plan and the strategy for the future shall be worked out immediately. Till the draft master plans get completed all towns should have a coarse land use plan which will be called a structure plan. The structure plan will also delineate the core area of all towns/municipalities/area of council.

5.2 Distribution of uses at various levels as per the hierarchy of road network

A) Minimum Road width required for Residential plots (plotted Development) shall be 20'.

B) Cluster Level uses abutting Roads having RoW not less than 25 feet

- All uses mentioned at 'A' above.
- All types of Residential uses other than group housing;
- Convenient shops of day-to-day nature in the isolated shops.
- Tot-lots, green open spaces;
- Auto-stand, Parking Lot;
- Cluster park, tot-lots;
- Electric sub-station, OHTs;
- Educational Institutions up to Primary Level only;
- Health Institutions up to Dispensary and Sub-Centre level;
- Community Room/Library, ATMs.

C) Neighbouring Level Uses abutting the Roads having RoW not less than 40 Feet:

- All uses mentioned at (B) above;
- Group housing up to plot size 8000 sqm only;
- Neighbouring Park;
- Commercial;
- Diagnostic centres, testing labs, Food Courts, Retail shopping, boutiques
- Educational Institutions up to 12th standards only;
- Health Institutions up to Primary Health Centres level and Nursing Homes;
- Mini-Bus stand, Multi-storied Parking;
- Homestays, Guest Houses;
- Banks/Financial Institutions, Computer centres, telegraph/post office etc. upto 500 sqm plot area;
- Public Library/Community Hall (Govt. Only);
- Religious use like mosques, temple etc.
- Craft centres, Fire Stations, Police stations;

- Polyclinics, radio diagnostic centres/micro biological/ pathological labs;
- Electric Distribution stations, Post & Telegraph, Telecommunications;

D) Sector Level Uses abutting the Roads, having RoW not less than 50 Feet:

- All uses mentioned at (C) above;
- Commercial
- Sector Park, Jogging Park, Children Park, Playfields, Indoor stadia;
- Banks/Financial Institutions, Computer centres, telegraph/post office etc. upto 500 sqm plot area
- Wholesale shops, Departmental stores;
- Group housing above 8000 sqm;
- Hotels, Restaurants, Shopping Centres, Non-automobile Showrooms;
- Banks/Financial Institutions, Computer centres, having more than 275 and up to 500 sqm built up area
- Petrol Pumps;
- Govt. offices.

E) Sub-District Level Uses abutting the Roads having RoW not less than 65 Feet:

- All uses mentioned at (D) above;
- Sub-District Park, Amusement Park;
- Outdoor stadia, Club, Theatre;
- Commercial
- Education— Academic Colleges, Polytechnics, it is etc.
- Health—General Hospitals, Maternity Hospitals, Super-Sociality Hospitals;
- Power Infrastructure, Receiving Stations;
- But Terminals;
- Tourists Centre, Tourist Complexes etc.
- Industrial Estates, Industrial Parks;
- Garbage Dumping Yards/sites;
- Farm Houses;
- Workshops, Slaughter Houses, Arboretum;
- Banquet Halls/ Janj Ghar.

F) District Level Uses abutting the Roads having RoW not less than 80 Feet:

- All uses mentioned at (E) above;
- City Park/District Park;
- Cinema, Cineplex, Multiplex, Shopping Malls/Complexes (subject to the condition that the minimum distance of the facility from other such similar facility is not less than one km along the Road in any direction);
- Stadium, Zoological Park, Botanical garden, Shooting Range;

- Professional colleges, IITs, University Campuses, IIMs;
- Hospitals treating contiguous diseases etc.;
- Major city Hospitals;
- District Police Lines;
- Govt. offices of district or regional level;
- IFC, Truck Terminals, Railway Station, Airport;
- Auditorium, Museum Art Galleries, central Library;
- Reformatories, Jails etc.;
- Commercial;
- Automobile Service, Repair Workshops and showroom.

G) District Level Uses abutting the Roads having RoW not less than 100 Feet:

- All uses mentioned at (F) above;
- Exhibition Grounds;
- Film and Studios;
- Gas bottling Plants;
- Star Hotels, International Conference Centres etc.;
- State Capital Offices;
- Commercial;

5.3 Residential use zone:

5.3.1 Permitted uses/Activities

Residence – plotted, (detached, semi – detached and row housing) group housing houses, residential flat, residential -cum-work, hostel, boarding and lodging (accommodation for transit employees of Govt. / local bodies)house, barat ghar / marriage hall, community hall, old age home, police post guest house, crèche, day care centre, convenience shopping centre, local retail shopping, Parking incidental to residential use, medical clinic, dispensary, nursing home and health centres (20 beds), dispensary for pets and animals, professional office , educational building: (nursery, primary, high school, college) , school for mentally / physically challenged, research institute, community centre, religious premises, library, gymnasium, playground, park/ tot-lot, plant nursery, technical training centre, yoga centre / health clinic, exhibition and art gallery, club, bank / ATM, police station, E-rickshaw stand taxi stand/three wheeler stand, bus stop, electrical distribution depot., water pumping station, post office , hostel of non-commercial nature, kindergarten, public utilities and buildings except service and storage yards.

5.3.2 Restricted uses / activities

Dharamshala, night shelters, petrol pumps, motor vehicle repairing workshops / garages, household industry, bakeries and confectioneries, storage of LPG gas cylinders, burial ground, godowns, bus depots without workshop, markets for retail goods, weekly markets (if not

obstructing traffic circulation and open during non-working hours), informal markets, transient visitors camp, municipal , state and central govt. offices.

5.3.2 Prohibited uses / Activities

Heavy, large and extensive industries, noxious, liquor shop, obnoxious and hazardous industries, warehousing, storage godowns of perishables, hazardous, inflammable goods, workshops for buses etc., slaughter houses, wholesale mandis, hospitals treating contagious diseases, sewage treatment plant/ disposal work, water treatment plant, solid waste dumping yards, outdoor games stadium, indoor games stadium, shooting range, zoological garden , botanical garden, bird sanctuary, picnic hut, international conference centre, courts, sports training centre, reformatory, district battalion office, forensic science laboratory.

The residential areas are developed either as: a) Plotted Development or b) Group Housing/ Flatted Development. The density pattern i.e. (high density, medium density or low density) are followed for working out the pattern of development with respect to the size of the plot to number of dwelling units on each plot, setbacks, FAR and no. of storey's/ height of the building. The development norms for different use/ activities and on different size of plots shall be applied for sanctioning of the plan.

5.3.3 Residential use in designated core area of old city:

The designated area of old city shall compromise of the congested part of the city. In essence it shall comprise of the densely populated wards of the old city.

Table 5.1: -

Max. Ground Coverage permissible	70%
No. of storeys	Ground + 2

Note:

No building shall be allowed on lands with more than 30% slope. Building line for proposed building shall be governed by Ribbon Development Act and National Highway building line.

Minimum size plots:

The minimum plot size for economically weaker section of society may be 25 Sq. mts. plot coverage, No. of permissible storey and setbacks are given in the following table:-

Plotted Housing:

Table 5.2: -

S.No	Area (In Sq mt)	Max. Ground Coverage	No. of Storeys	Type of Const	Set Back Limits (Minimum)			
					Front (M)	Rear (M)	Side (M)	Side (M)
1	25 - 75	75%	G+2	Row	1.5	0	0	0
2	Above 75 -125	70%	G+2	Row	2.0	1	0	0
3	Above 125 -275	65%	G+2	Row	3	2	0	0
4	Above 275 - 350	55%	G+2	Semi-detached	4	2	2	0
5	Above 350 - 450	50%	G+2	Semi-detached	5	2	2	0
6	Above 450 - 600	45%	G+2	Detached	6	3	3	2
7	Above 600 -1000	40%	G+2	Detached	7	3	3	2
8	Above 1000	35%	G+2	Detached	10	3	3	2

Note:

I. No side setbacks shall be required in plots or irregular proportions/ dimensions upto the width of 10M. Minimum front set back of 1.5M and rear set back of 1M shall be permitted in cases where depth of such irregular plots is upto 12M. However, there shall be no change in permissible ground coverage, No. of storeys and height of the building as given in the table above.

II. The Maximum height of a residential house shall not be more than 12M. Height of each storey in a residential house shall not be less than 3M, Stair case Mounty height up to 2.5M shall be in addition to G+2 storeys permissible.

III. Convenient shop wherever allowed (max. 18 Sqm) shall be allowed within the profile of building. Convenient shop shall be allowed on ground floor only, with upto a max. height of 4M.

IV. Mezzanine floor shall not be allowed in residential houses.

V. Total habitable floor area shall not be in any case more than three times the allowable ground coverage.

VI. Minimum Parking requirement for individual plotted housing shall be calculated @ 0.25 ECS for every 40 Sqm of built up area.

VII. To cater to this parking requirement in individual plotted residential houses, Stilt Floor shall be allowed within the building envelope and shall be exclusively used for parking.

VIII. Any area within building envelope provided for parking on ground shall not be counted in covered floor area and the same area shall be allowed for habitable purpose on 3rd floor.

IX. In case stilt parking is provided within building envelope in combination with ground floor, the area under parking shall be allowed for habitation on 3rd floor. Height of Stilt floor in this case shall not be more than 3M.

X. Basements shall not be allowed in row housing but single basement shall be allowed in detached and semi-detached housing subject to fulfilment of basement norms as per ***National Building Code****.*

XI. Basements in individual plotted housing shall be counted towards FAR and coverage.

XII. Single basement upto 2.4M underground shall be allowed within the building envelope in case of detached and semi-detached housing subject to provision of minimum setback of 3M from the periphery of the plot and height of basement from finished floor to the underside of beam shall not be more than 3M.

XIII. Garages shall not be allowed in the peripheral setbacks of the building.

XIV. Porches upto an area of 17 Sq.mtr. shall be allowed in detached and semi- detached housing and no construction on such porches shall be allowed.

XV. Areas under porch shall be added @ 50% on ground coverage.

i) Group Housing/ Flatted Development:

a) Multi Storied Group Housing/ Flatted Development:

1. Minimum approach road (RoW) for Multi Storied Group Housing on a plot area of 4000 Sq.mtrs. to 8000 Sq.mtrs shall be 12M.

Table 5.3: -

Ground coverage	25%
Max. FAR shall be	180
Max Du* / Hectare shall be	180
Max. Height of building shall be	No restriction subject to Air safety regulations, Traffic

	circulations, Fire Safety norms. Fire preparedness, Equipments available within Fire Department of that area, Structural Safety norms and Hazard Risk Vulnerability Assessment norms, and others etc.

**Du: Dwelling unit.*

2. For plots having area above 8000 Sqm minimum approach road shall be more than 15M

Table 5.4: -

Ground coverage	25%
Max. FAR shall be	220
Max Du/Hectare shall be	220
Max. Height of building shall be	No restriction subject to Air safety regulations, Traffic circulations, Fire Safety norms. Fire preparedness, Equipments available within Fire Department of that area, Structural Safety norms and Hazard Risk Vulnerability Assessment norms, and others etc.

(For group Housing, extra FAR of 20 shall be allowed as Tradable/Chargeable FAR after the policy is framed by the Government)

Notes:

i) The group housing scheme shall be subject to Reservation Policy for EWS/LIG Housing for Urban Poor.

ii) Byelaws for affordable housing shall be as per guidelines of HFA (PMAY, Urban-2022).

iii) *Three basements within the building envelope if used for parking shall be allowed as specified in the basement norms.*

iv) Convenience shops @ maximum 1 shop/20 DU shall be provided within the campus after leaving the requisite setbacks. The size of each convenient shop shall not be more than 18 sqm and shall be counted as FAR.

v) Security room may be allowed at the entrance gate upto a maximum built up area of 15 Sqm (upto 3.5M height) after maintaining the RoW of road and shall be counted as FAR.

vi) Set Back norms for multi storied group housing shall be as under:

a. Front, both Sides and Rear setbacks = 1/3 of height of building or 7.5M or building line of the abutting road whichever is more.

vii) Minimum Floor height from finished floor for any habitable space shall be 2.75M.

viii) Parking shall be calculated on Built up area of individual unit for group housing and other residential houses as under:

Table 5.5: -

Upto 50 Sqm / EWS	*0.25 ECS*
Above 50 Sqm to less than 100 Sqm	*0.5 ECS*
From 100 Sqm upto 120 Sqm	*1.0 ECS*
Above 120 Sqm upto 180 Sqm	*1.5 ECS*
Above 180 Sqm	*2.0 ECS*

ix) Built up area (Unit Area) of apartment for calculation of ECS shall be excluding common service areas. Any service area within apartment shall be counted in built up area. Balconies and Verandas shall be counted @ 50% in FAR.

x) A building shall abut on a street or streets or upon spaces directly connected from the street by a hard surface approach road, width of approach road is not less than 12 metres.

xi) If there are any bends or curves on the approach road within the plot, a sufficient width shall be provided at the curve to enable the fire appliances to turn, the turning circle being at least of 9.0 m radius. Where entry to the plot is through a slip road the gate width shall not be less than 6 m for entry of the firefighting appliances.

xii) The approach road to the building within the plot and open spaces on its all sides up to 6 m width and the layout for the same shall be done in consultation with Chief Fire Officer, Fire Service and the same shall be reinforced to ensure safety of the fire equipment and capable of taking the weight of Fire engine, weighing up to 45 tonnes. The said open space shall be kept free of obstructions and shall be motorable.

xiii) Main entrances to the premises shall be of adequate width to allow easy access to the fire engine and in no case it shall measure less than 6 m. The entrance gate shall fold back against the compound wall of the premises, thus leaving the exterior access way within the plot free for movement of fire service vehicles. If archway is provided over the main entrance the height of the archway shall not be at a height less than 5m.

xiv) The catalogue for sale of apartments shall be similar to the basic plan approved by the authority.

xv) No deviation in the plan shall be allowed once the apartments are sold in part or whole.

xvi) No common areas like corridors, stairs, lifts, lobbies shall be allowed to be sold to a particular person or a group of persons after the apartments are sold in part or whole.

xvii) No apartment holder shall be allowed to have extra rights on common spaces.

xviii) Common spaces shall include all green spaces, children's parks, playgrounds, sports facilities, marriage or/and multipurpose halls, areas which are of common use of the apartment owners forming part of the sanctioned plan under bye-laws of the authority.

xix) Any additional space not counted in the permissible floor space shall also be treated as common areas.

xx) Designated parking spaces shall be allotted to apartment holders.

Tower to Tower Distance:
For multi storied building there shall be a space of 6 m all around up to 40m height and after that a space of 9m all around should be provided.

Height Exemptions:
a. Roof tanks and their supports not exceeding 1.0 m. in height.

b. Ventilating, air conditioning and lift rooms and similar service equipments.

c. Stair covered with Mounty not exceeding 3.00 m. in height.

d. Chimneys and parapet wall and architectural features not exceeding 1.50 m. in height, unless the aggregate area of such structures exceeds 1/3 of the roof area of the building on which they are erected. All such appurtenant structures shall be camouflaged to achieve streamlined aesthetics.

b) Housing Colonies:
A person or group of persons or a co-operative society or firm intending to plot out an estate into more than 4 plots (1000 Sqm or more) shall give notice in writing to the competent authority which will be accompanied by a layout plan of entire land showing the areas allotted for roads,

open spaces, plot and public buildings, the specification of the roads, drains and other infrastructures.

Min. Width of road

i) **Housing colony upto 50 Kanals**
Entry from the main road shall not be less than 30' and no internal road shall be less than 20'-0".

ii) **Housing colony beyond 50 Kanals**.
Entry from the main road shall not be less than 50' and no internal road shall be less than 20'-0".

Roads, Drains, water mains and electric lines required for the colony shall be constructed by the developer at his own cost and no plot shall be eligible for any services and utilities from the Govt. and/or Municipality unless the colony is developed properly and approved by the competent authority. No building plan shall be considered by the Municipality or prescribed authority in any plot of such a colony which has not received the prior approval of the competent Authority .(developer) in this case will mean the person, co-operative or the firm intending to plot out the land into more than 4 plots.

1. No housing colony can be allowed in the area not specified as the residential in the proposed Master Plan (if approved by Govt.) unless considered in any special circumstances by the competent authority with the approval of govt. In such housing colonies, the following standards shall apply:

   a) Area under roads: Min. 15% to 20% of the total area of land under the proposed colony.

   b) Land to be allotted for open spaces, schools and public building for a housing colony of 20 plots and above shall not be less than 15% of the total area of the colony. However, if the competent authority feels that an open space or a school site is absolutely necessary within the layout plan of less than 20 plots; necessary provision shall have to be made by the developer in the layout plan.

2. No housing colony will have shop plots of more than one for every ten plots. After the developed land is sold by the developer the roads and drains etc. constructed by the developer shall be transferred to the Municipality for their maintenance. Area under commercial use shall be 4% to 5%

3. Land use of the layout plan approved by the competent authority shall not be changed without the prior consent of the competent authority.

   Open spaces allocated for parks, play-fields, school sites and public building in a colony shall be deemed to have been sold along with the plots as a amenities of the colony by the developer to the plot holders of the colony. The development of such open spaces shall be the responsibility of the Developer.

   No permission shall be accorded for construction of a building in any notified area which shall cause nuisance by way of odour, smoke, noise or disturbance to inhabitants of the locality or be injurious to health of the residents of the buildings or to the inhabitants in the surrounding areas.

4. The housing colony shall be subject to Reservation Policy for EWS/LIG Housing for Urban Poor.

5.4 Commercial use:

Permitted uses/Activities

Shops, convenience / neighbourhood shopping centre, local shopping centers, professional offices, work places / offices, banks, stock exchange / financial institution, bakeries and confectionaries, cinema hall / theatre, malls, malls, banquet halls, guesthouses, restaurants, hotels, Parking, weekly market, petrol pumps, godowns and warehousing, general business, wholesale, residential plot-group housing, hostel / boarding housing, hostel, banks / ATM, auditoriums, colleges, nursing homes / medical clinic, pet clinics, religious places, office / work places, commercial centers, research / training institute, commercial service centers / garages / workshop, baratghar / night shelter, weekly / formal markets, library, parks / open space, museum, police stations /post, taxi stand /three wheeler stand, parking site , post offices, government /institutional offices, telephone exchange / centers, warehousing and covered storage, research institutions.

Restricted uses / activities

Non-pollution, non-obnoxious light industries, warehousing / storage godowns of perishable, inflammable goods, coal, wood timber yards without saw mill, bus and truck depots, gas installation and gas works, poly-techniques and higher technical institutes, water treatment plant, railway yards /stations, sports / stadium and public utility installation, hotel and transient visitor's homes, religious buildings, hospitals and nursing homes.

Prohibited uses / Activities

Dwellings except those of service apartment, essential operational, watch and ward personal , heavy, extensive, noxious, obnoxious, hazardous and extractive industrial units, hospitals /

research laboratories treating contagious diseases, poultry / dairy farms, slaughter houses, sewage treatment / disposal sites, agricultural uses, storage of perishable and inflammable commodities, quarrying of gravel, sand, clay and stone, zoological garden, botanical garden, bird sanctuary, picnic hut, international conference centre, courts, sports training centre, reformatory, district battalion office , forensic science laboratory and all other activities which may cause nuisance and are noxious and obnoxious in nature.

Single Shops

Plot Area upto 100 Sq.mtrs

Table 5.6: -

Minimum approach road	7.5M
Max. Ground Coverage	70%
Max. FAR	210%
Maximum Height	12 M (G+2)

Front set back shall be 2M or Building line of the road whichever is more. In case more than one road is abutting the site, a setback of 2m building line of the roads whichever is more should be maintained.

Parking shall be provided @ 2ECS for 100 Sqm of builtup area. Basement shall not be allowed.

Note:

Shopping permissible on ground and 1st floor only.

Shopping Cluster

a) Plot Area : 100 Sq.mtrs.- 300 Sq.mtrs.

Table 5.7: -

Minimum approach road (RoW)	12M
Max. Ground Coverage	60%
Max. FAR	180
Maximum Height	14M
Min. Rear and one Side Setback	3M

Set Backs:

Front set back shall be min. 3M or Building line of the road whichever is more. In case more than one road is abutting the site, setback of 3m building line of the roads whichever is more should be maintained.

Parking:

Parking shall be provided @ 2 ECS for 100 Sqm of builtup area.
Basement shall not be allowed.

Note:
Shopping permissible on ground and 1st floor only.

b) Plot Area: 300 Sqmt - 750 Sqmts

Table 5.8: -

Minimum approach road (RoW)	12M
Max. Ground Coverage	50%
Max. FAR	180
Maximum Height	No restriction subject to Air safety regulations, Traffic circulations, Fire Safety norms. Fire preparedness, Equipments available within Fire Department of that area, Structural Safety norms and Hazard Risk Vulnerability Assessment norms, and others etc.
Min. Rear and one Side Setback	3M

Set Backs:
Front set back shall be min 4.5M or Building line of the road whichever is more. In case more than one road is abutting the site, a setback of 3m or building line of the roads whichever is more should be maintained.

Parking:
i. Parking shall be provided @ 2 ECS for 100 Sqm of built-up area.

ii. Single Basement within the building envelope shall be allowed as specified in the basement norms.

iii. Stilt floors within the building envelope shall be allowed for parking only.

iv. Basements / Stilt floors if used for parking shall not be counted in FAR.

v. Max. Height of stilt floor from finished floor to underside of beam shall be 2.5M.

Commercial Complex
a.) Plot Area : 750 Sq.mtrs to 2000 sq.mtrs

Table 5.9: -

Minimum approach road (RoW)	15M
Max. Ground Coverage	45%
Max. FAR	180
Min. Rear setback	1/3rd of ht. of building or 3M whichever is more (subject to high rise building norms)
Side Setbacks	min. 3M (both sides)
Max. Height	No restriction subject to Air safety regulations, Traffic circulations, Fire Safety norms. Fire preparedness, Equipments available within Fire Department of that area, Structural Safety norms and Hazard Risk Vulnerability Assessment norms, and others etc.

Set Backs:

Front set back shall be min 6M or Building line of the road whichever is more. In case more than one road is abutting the site, Building line of the roads should be maintained.

Parking:

i. Parking shall be provided @ 2 ECS for 100 Sq.mtrs of built-up area.

ii. Single Basement within the building envelope shall be allowed as specified in the basement norms.

iii. Stilt floors within the building envelope shall be allowed.

iv. Basements/Stilt floors if used for parking shall not be counted in FAR.

v. Max. clear Height of stilt floor (from finished floor to underside of beam) shall be 2.5M.

b.) Plot Area: 2000 Sqmts to 4000 sqmts

Table 5.10: -

Minimum approach road (RoW)	18M
Max. Ground Coverage	40%
Max. FAR	180
Min. Rear setback and Both Side Setback	1/3rd of ht. of building or 6M Whichever is more
Max. Height	No restriction subject to Air safety regulations,

	Traffic circulations, Fire Safety norms. Fire preparedness, Equipments available within Fire Department of that area, Structural Safety norms and Hazard Risk Vulnerability Assessment norms, and others etc.

Set Backs:

Front set back shall be min 9M or Building line of the road whichever is more. In case more than one road is abutting the site, Building line of the roads should be maintained.

Parking:

i. Parking shall be provided @ 2 ECS for 100 Sqm of built-up area.

ii. Double basements (upto 50% of plot area per basement) if used for parking shall be allowed as specified in the basement norms.

iii. Stilt floors within the building envelope shall be allowed.
iv. Basements/Stilt floors if used for parking shall not be counted in FAR.
v. Max. Height of stilt floor (from finished floor to underside of beam) shall be 2.5M.

c.) Plot Area: More than 4000 sq.mts

Table 5.11: -

Minimum approach road (RoW)	25M
Max. Ground Coverage	35%
Max. FAR	180
Min. Rear setback and Both Side Setback	1/3rd of ht. of building or 6M whichever is more
Max. Height	No restriction subject to Air safety regulations, Traffic circulations, Fire Safety norms. Fire preparedness, Equipments available within Fire Department of that area, Structural Safety norms and Hazard Risk Vulnerability Assessment norms, and others etc.

Set Backs:

Front set back shall be min 12M or Building line of the road whichever is more. In case more than one road is abutting the site, building line of the roads should be maintained.

Parking:

i. Parking shall be provided @ 2.5 ECS for 100 Sqm of built-up area.

ii. Three basements (upto 50% of plot area per basement) if used for parking shall be allowed as specified in the basement norms.

iii. Stilt floors within the building envelope shall be allowed.

iv. Basements/Stilt floors if used for parking shall not be counted in FAR.

v. Max. Height of stilt floor from finished floor to underside of beam shall be 2.5M.

Note:

Height of Mumty/ liftwell above the terrace shall be in addition to the prescribed height.

Cinemas/ Cineplex

Table 5.12:

Minimum approach road	25M
Min. Plot area	4000 Sqm
Max. Ground coverage	50%
Max. FAR	150
Min. Rear and Both Side Setback	1/3rd of height of building
Max. Ht.	No restriction subject to Air safety regulations, Traffic circulations, Fire Safety norms. Fire preparedness, Equipments available within Fire Department of that area, Structural Safety norms and Hazard Risk Vulnerability Assessment norms, and others etc.

Refreshment Canteen/ food court upto15% of FAR shall be allowed.

Set Backs:

Front setback shall be min 9M or Building line of the road whichever is more. In case more than one road is abutting the site, building line of the roads should be maintained.

Parking:

i. Parking shall be provided @ 1 ECS for 3 seats of cinema. Additional parking shall be provided @ 2 ECS for 100 Sqm of built up area for uses incidental to Cinemas/Cineplex.

ii. Three basements within the building envelope if used for parking shall be allowed as specified in the basement norms.

iii. Stilt floors within the building envelope shall be allowed.

iv. Basements/Stilt floors if used for parking shall not be counted in FAR.

v. Max. Height of stilt floor from finished floor to underside of beam shall be 2.5 M.

Hotels / Motels:

a.) Plot Area: 1000-2500 Sqmts

Table 5.13: -

Max. Ground Coverage	40%
Max. FAR	180
Min. approach road (RoW)	15 M
Min. Rear and Both Side Setback	1/3rd of height of building or 6M Whichever is more
Max. Height	No restriction subject to Air safety regulations, Traffic circulations, Fire Safety norms. Fire preparedness, Equipments available within Fire Department of that area, Structural Safety norms and Hazard Risk Vulnerability Assessment norms, and others etc.

5% of permissible FAR for party hall and 3% permissible FAR for Conference hall shall be allowed.

Set Backs:

Front set back shall be 6M or 1/3rd of height of building or Building line of the road whichever is more. In case more than one road is abutting the site, building line of the roads should be maintained.

Parking:

i. Parking shall be provided @ 1 ECS for 3 guest rooms. Additional parking shall be provided @ 2 ECS for 100 Sqm for uses incidental to Hotel. (Areas under lifts, elevators, stair cases, service ducts, plant rooms, service floors not more than 1.5M from finished floor upto soffit of beam and open to sky swimming pools shall not be counted for parking).

ii. For Conference halls/party halls/bars/restaurants etc (Excluding entrance hotel lobby/atrium) min parking @ 1.5 ECS for 10 Sqm shall be provided.

iii. Double basements (upto 50% of plot area per basement) if used for parking shall be allowed as specified in the basement norms.

iv. Stilt floors within the building envelope shall be allowed.

v. Basements/Stilt floors if used for parking shall not be counted in FAR.

vi. Max. Height of stilt floor (from finished floor to underside of beam) shall be than 2.5 M.

b.) Plot Area: Above 2500 Sqm

Table 5.14: -

Max. Ground Coverage	30%
Max. FAR	200
Min. approach road (RoW)	20 M
Min. Rear and Both Side Setback	1/3rd of height of building or 6M whichever is more
Max. Height:	No restriction subject to Air safety regulations, Traffic circulations, Fire Safety norms. Fire preparedness, Equipments available within Fire Department of that area, Structural Safety norms and Hazard Risk Vulnerability Assessment norms, and others etc.

5% of permissible FAR for party hall and 3% permissible FAR for Conference hall shall be allowed.

For plots more than 12K facilities like banquet hall shall be allowed with parking provision as per banquet norms.

Set Backs:

Front set back shall be 9M or 1/3rd of height of building or Building line of the road whichever is more. In case more than one road is abutting the site, building line of the roads should be maintained.

Parking:

i. Parking shall be provided @ 1 ECS for 3 guest rooms. Additional parking shall be provided @ 2 ECS for 100 Sqm for uses incidental to Hotel. (Areas under lifts, elevators, stair cases, service ducts, plant rooms, service floors not more than 1.5M from finished floor upto soffit of beam and open to sky swimming pools shall not be counted for parking).

ii. For Conference halls/party halls/bars/restaurants etc (Excluding entrance hotel lobby/atrium) min parking @ 1.5 ECS for 10 Sqm shall be provided.

iii. Three basements (upto 50% of plot area per basement) if used for parking shall be allowed as specified in the basement norms.

iv. Stilt floors within the building envelope shall be allowed.

v. Basements/Stilt floors if used for parking shall not be counted in FAR.

vi. Max. Height of stilt floor from finished floor to underside of beam shall be than 2.5 M.

Mall cum Multiplexes:

Definition: -Multiplex complex shall mean an integrated entertainment and shopping centre/ complex having at least 2 cinema halls/ PVRs The minimum area on which this use shall be permitted should not be less than 0.40 Hectares, or 4000 Sq.mts. Apart from cinema halls, the multiplexes shall also have a restaurant, fast food, outlet, pubs, Health spas/ centres, hotels and other recreational activities. The shopping centre may have retail outlet, video games, parlours, bowling alleys, health centres, shopping malls and office space.

Existing cinema halls can be considered for conversion into a multiplex by the Building Permission Authority provided it has a minimum plot area of 2500 Sq.mts.

Bye Laws:

***a.) Plot Area: 1000-2500 Sq.mts*.**

Table 5.15: -

Max. Ground Coverage	40%
Max. FAR	180
Min. approach road (RoW)	15 M
Min. Rear and Side Setbacks	1/3 rd of height of building or 6M Whichever is more
Max. Height	No restriction subject to Air safety regulations, Traffic circulations, Fire Safety norms. Fire preparedness, Equipments available within Fire Department of that area, Structural Safety norms and Hazard Risk Vulnerability Assessment norms, and others etc.

5% of permissible FAR for party hall and 3% permissible FAR for Conference hall shall be allowed.

Set Backs:

Front set back shall be 6M or 1/3rd of height of building or Building line of the road whichever is more. In case more than one road is abutting the site, building line of the roads should be maintained.

Parking:

i. Parking shall be provided @ 1 ECS for 3 guest rooms. Additional parking shall be provided @ 2 ECS for 100 Sqm for uses incidental to Hotel. (Areas under lifts, elevators, stair cases,

service ducts, plant rooms, service floors not more than 1.5M from finished floor upto soffit of beam and open to sky swimming pools shall not be counted for parking).

ii. For Conference halls/party halls/bars/restaurants etc. (Excluding entrance hotel lobby/atrium) min parking @ 1.5 ECS for 10 Sqm shall be provided.

iii. Double basements (upto 50% of plot area per basement) if used for parking shall be allowed as specified in the basement norms.

iv. Stilt floors within the building envelope shall be allowed.

v. Basements/Stilt floors if used for parking shall not be counted in FAR.

vi. Max. Height of stilt floor (from finished floor to underside of beam) shall be than 2.5 M.

b.) Plot Area: above 2500 Sqm

Table 5.16: -2

Max. Ground Coverage	30%
Max. FAR	200
Min. approach road (RoW)	20 M
Min. Rear and Side Setbacks	1/3rd of height of building or 6M whichever is more
Max. Height	No restriction subject to Air safety regulations, Traffic circulations, Fire Safety norms. Fire preparedness, Equipments available within Fire Department of that area, Structural Safety norms and Hazard Risk Vulnerability Assessment norms, and others etc.

5% of permissible FAR for party hall and 3% permissible FAR for Conference hall shall be allowed.

For plots more than 12K facilities like banquet hall shall be allowed with parking provision as per banquet norms.

Set Backs:

Front set back shall be 9M or 1/3rd of height of building or Building line of the road whichever is more. In case more than one road is abutting the site, building line of the roads should be maintained.

Parking:

i. Parking shall be provided @ 1 ECS for 3 guest rooms. Additional parking shall be provided @ 2 ECS for 100 Sqm for uses incidental to Hotel. (Areas under lifts, elevators, stair cases, service ducts, plant rooms, service floors not more than 1.5M from finished floor upto soffit of beam and open to sky swimming pools shall not be counted for parking).

ii. For Conference halls/party halls/bars/restaurants etc. (Excluding entrance hotel lobby/atrium) min parking @ 1.5 ECS for 10 Sqm shall be provided.

iii. Three basements (upto 50% of plot area per basement) if used for parking shall be allowed as specified in the basement norms.

iv. Stilt floors within the building envelope shall be allowed.

v. Basements/Stilt floors if used for parking shall not be counted in FAR.

vi. Max. Height of stilt floor from finished floor to underside of beam shall be than 2.5 M.

Janjghar/ Community Center/ Banquet Hall:

Table 5.17: -

Minimum Plot Area	1.5 acres (12 Kanals)
Max. Ground Coverage	30%
Max. FAR	60%
Max. Height	No restriction subject to Air safety regulations, Traffic circulations, Fire Safety norms. Fire preparedness, Equipments available within Fire Department of that area, Structural Safety norms and Hazard Risk Vulnerability Assessment norms, and others etc.

a) In case of Banquet halls/Community centre minimum plot area should not be less than 12K and minimum parking should be provided 150 ECS upto1000 Sqm of built up area. For constructions more than 1000 Sqm, an additional parking @1.5 ECS per 10Sqm shall be provided. In case the plot of land is more than 20 K, additional parking @ 6 ECS per Kanal shall be provided. Double basements to the extent of 50% of plot area per basement shall be allowed. Basements should be allowed for parking only.

b) In case of sloping roof no activity shall be allowed in the attic space.

c) Minimum side and rear setbacks shall be 6m or 1/3rd of height of building whichever is more. Front set back shall be governed by building line of road or 20m whichever is more. No construction shall be allowed in the setbacks and the building line of the road.

d) Security room may be allowed at the entrance gate upto a maximum built up area of 15 Sqm (upto 3.5M height) after maintaining the RoW of road and shall be included in FAR. Parking shall not be allowed in proposed RoW of roads.

e) Bore wells and power driven water pumps shall not be allowed in construction sites or in any building without license and proper permission from the competent authorities.

f) For banquet halls the RoW of approach road shall be minimum 20m.

g) Banquet halls shall not be allowed in close proximity of any water body like rivers, canals, nallahs, lakes etc. The minimum distance of the plot for banquet hall shall be as per buffer mentioned in the Master Plan.

Warehousing, Storage Vegetables & Fruit Mandis:

Table 5.18: -

Minimum Plot area	2.5 Hec (25.000 Sqm)
Maximum Coverage	25%
FAR	100%
Max. Height	No restriction subject to Air safety regulations, Traffic circulations, Fire Safety norms. Fire preparedness, Equipments available within Fire Department of that area, Structural Safety norms and Hazard Risk Vulnerability Assessment norms, and others etc.
Parking	2 ECS for 100 sqm built up area

Multi-Level Parking

Multi–Level Parking facility should preferably be developed in the designed parking space or in the Residential, Public/Semi-Public, Commercial, Transport node, Bus Depots etc with the following Development Controls.

Table 5.19: -

Minimum number of car parking spaces	50
Minimum Plot Area	2000 Sqm (Plain areas)
Maximum Ground Coverage	66%
Minimum approach road	15M (RoW)

Front Set back	Building line of road or 1/3rd of height of building or 6m whichever is more.
Rear and side setbacks	Building line of road or 1/3rd of height of building or 3m whichever is more.
Terrace/Roof Top Parking	Shall be allowed with proper Protection etc. to the satisfaction of authorities.

a. In order to compensate the cost of Multi-Level Parking, a maximum 25% of Gross permissible Floor Area may be utilized as Commercial/Office space.

b. Maximum FAR proposed for commercial spaces shall be 100 (excluding parking areas)

c. In addition to requisite parking space required for Commercial developed within the Multi-Level Parking complex (@ 3 ECS / 100M^2), Three times additional space for parking components shall be provided.

d. Three Basements shall be allowed for Parking as specified in the basement norms.

e. Maximum Height - No restriction subject to Air safety regulations, Traffic circulations, Fire Safety norms. Fire preparedness, Equipments available within Fire Department of that area, Structural Safety norms and Hazard Risk Vulnerability Assessment norms, and others etc.

f. Shops/Offices/Commercial spaces shall be allowed on ground and first floor, only for rehabilitation of project affected persons in Government comprehensive schemes.

g. In case of government comprehensive schemes, development controls including height shall be as per approved scheme.

Non-residential Premises:

Dharamshala and Night Shelter

Table 5.20:-

Minimum size of plot	1000 sqm.
Maximum Ground Coverage	30%
Maximum FAR	1.20
Height	No restriction subject to Air safety regulations, Traffic circulations, Fire Safety norms. Fire preparedness, Equipments available within Fire Department of that area, Structural Safety norms and Hazard Risk Vulnerability Assessment norms, and others etc.

Other Controls:

1. Minimum R/W in front 16 m.
2. Basement upto the building envelope to the maximum extent of 50% plot area shall be allowed and if used for parking and services should not be counted in FAR.

5.5 Public and semi-public / institutional use:

Permitted uses/Activities

Government offices, central, state, local and semi-government, public undertaking offices, defence court, universities and specialized educational institute, polytechnic, colleges, schools, nursery and kindergarten (not to be located near hospital and health care facility), research and development centres, social and welfare centres, libraries, social and cultural institutes, religious buildings / centres, conference halls, community halls, baratghar, dharamshala, guest house, museum / art galleries, exhibition centres, auditoriums, open air theatre, recreational club, playground, banks , police stations/ police post, police lines, police headquarters, jails, fire stations,/ fire posts, post and telegraph, public utilities and buildings, solid waste dumping grounds / sites, post offices, local state and central govt. offices and use of defence purposes, bus and railway passenger terminals, public utility and buildings, local municipal facilities, uses incidental to government offices and for their use, monuments, radio transmitter and wireless stations, telecommunication centre, telephone exchange, hospitals, health centres, nursing homes, dispensaries and clinic.

Restricted uses / activities

Residential flats and residential plot for group housing for staff employees, hostels, water supply installations, sewage disposal works, service stations, railway stations / yards, bus / truck terminals, burial grounds, cremation grounds and cemeteries / graveyards , warehouse / storage godowns, helipads, commercial uses/ centres, other uses / activities.

Prohibited uses / Activities

Heavy, extensive and other obnoxious, hazardous industries, slaughter houses, junk yards, wholesale mandis, dairy and poultry farms, farm houses, workshop for servicing and repairs, processing and sale of farm product and uses not specifically permitted herein.

PUBLIC AND SEMI PUBLIC/ INSTITUTIONAL USE:

Minimum approach roads (RoW) shall be 12m.

Offices: General/ Government Offices/ Integrated Office Complex

Table 5.21:-

Max. Ground Coverage	30%
Max. FAR	200
Max. Height	No restriction subject to Air safety regulations, Traffic circulations, Fire Safety norms. Fire preparedness, Equipments available within Fire Department of that area, Structural Safety norms and Hazard Risk Vulnerability Assessment norms, and others etc.
Front set back	12M or 1/3rd of ht. of bldg. or Building Line of road whichever is more.
Rear and Side setbacks	1/3rd of ht. of bldg. or 3m.or building line of abutting road whichever is more (Subject to norms of high rise buildings.).
Parking	2 ECS per 100 Sqm of covered area.

Other Control:

1. The integrated office complex shall include Central Government Office, Local Government Office, Public Undertaking Offices and Courts.
2. Maximum upto three basements within the building envelope line to the maximum extent of plot area shall be allowed and if used for parking and services should not be counted in FAR.
3. Stilt floors within the building envelope shall be allowed.
4. Basements/Stilt floors if used for parking shall not be counted in FAR.
5. Max. Height of stilt floor from finished floor to underside of beam shall be 2.5M.
6. Minimum plot area for offices shall be 500 Sqm.
7. These norms shall not apply on basic/ important infrastructure/ utilities to be created by government and shall be as per the government policies.

Educational:

a) Pre-Nursery/ Creches

Table 5.22: -

Minimum Plot Area	250 Sqmt
Norms	As per Residential norms

Note:

Pre-Primary Schools/ Nursery Schools/ Montessori Schools/Crèche, Play Schools, may be permissible in residential use premises as per mixed use policy.

b) Nursery School:

Table 5.23: -

Minimum Plot Area	750 Sqmt

Maximum Ground Coverage	33.33%
Maximum FAR	100%
Maximum height	No restriction subject to Air safety regulations, Traffic circulations, Fire Safety norms. Fire preparedness, Equipments available within Fire Department of that area, Structural Safety norms and Hazard Risk Vulnerability Assessment norms, and others etc.
Front Set back	6M or Building Line of road or as per residential norms whichever is more.
Rear and side setbacks	3M or building line of road whichever is more.

Note:

i. Nursery Schools should be allowed on approach road not less than 7.5 (RoW).

ii. Stilt floors within the building envelope shall be allowed. Stilt floor if used for parking shall not be counted in FAR.

iii. Max. Height of stilt floor from finished floor to underside of beam shall be 2.5M.

iv. Basements shall not be allowed.

c) Primary School:

Table 5.24: -

Minimum Plot Area	2000 Sqmts
Maximum Ground Coverage	33%
Maximum FAR	120
Maximum height	No restriction subject to Air safety regulations, Traffic circulations, Fire Safety norms. Fire preparedness, Equipments available within Fire Department of that area, Structural Safety norms and Hazard Risk Vulnerability Assessment norms, and others etc.
Front Setback	6M or 1/3 of Ht. of building or building line of road whichever is more.
Rear and both Side setbacks	1/3rd of Ht. of building or 3M or building line of road whichever is more.

i. Primary Schools shall be provided on approach road not less than 7.5M (RoW).

ii. Stilt floors within the building envelope shall be allowed. Stilt floor if used for parking shall not be counted in FAR.

iii. Max. Height of stilt floor from finished floor to underside of beam shall be 2.5M

iv. Single basement within the building envelope shall be allowed for parking as specified in the basement norms.

d) Middle School:

Table 5.25: -

Minimum Plot Area	4000 Sq.mts.
Maximum Ground Coverage	33%
Maximum FAR	120%
Maximum height	No restriction subject to Air safety regulations, Traffic circulations, Fire Safety norms. Fire preparedness, Equipments available within Fire Department of that area, Structural Safety norms and Hazard Risk Vulnerability Assessment norms, and others etc.
Front Set back	12M or1/3rd of Ht. of building or building Line of road whichever is more.
Rear and side setbacks	1/3rd of Ht. of building or 3M or building line of road whichever more.

i. Middle Schools should be provided on approach roads not less than 12M (Row).
ii. Stilt floors within the building envelope shall be allowed. Stilt floor if used for parking shall not be counted in FAR.
iii. Max. Height of stilt floor from finished floor to underside of beam shall be 2.5M.
iv. Single basement within the building envelope shall be allowed for parking as specified in the basement norms.

e) High/ Higher Secondary School:

Table 5.26: -

Minimum Plot Area	7500 Sqm.
Maximum Ground Coverage	35%
Maximum FAR	150
Maximum height	No restriction subject to Air safety regulations, Traffic circulations, Fire Safety norms. Fire preparedness, Equipments available within Fire Department of that area, Structural Safety norms and Hazard Risk Vulnerability Assessment norms, and others etc.
Front Set back	15M or 1/3rd of ht. of building or building line of road whichever is more.
Rear and side setbacks	1/3rd of ht. of building or 6M or building line of road whichever is more.

i High/Hr. Secondary Schools should be provided on approach roads not less than 18M (RoW).
ii. Single basement shall be allowed upto 25% of plot area as per standards mentioned in basement byelaws.
iii. Stilt floors within the building envelope shall be allowed.

iv. Basements/Stilt floors if used for parking shall not be counted in FAR.
v. Max. Height of stilt floor from finished floor to underside of beam shall be 2.5M.

f) College:

Table 5.27: -

Minimum Plot Area	30000 Sqm
Maximum Ground Coverage	25%
Maximum FAR	100
Maximum height	No restriction subject to Air safety regulations, Traffic circulations, Fire Safety norms. Fire preparedness, Equipments available within Fire Department of that area, Structural Safety norms and Hazard Risk Vulnerability Assessment norms, and others etc.
Front Set back	12M or1/3 of Ht. of building or building line of road whichever is more.
Rear and side setbacks	1/3rd of Ht. of building or 5M or building line of road whichever is more.

i. Colleges should be provided on approach roads not less than 18M (RoW).
ii. Single basement upto 25% of plot area shall be allowed as specified in the basement norms.
iii. Stilt floors within the building envelope shall be allowed.
iv. Basements/Stilt floors if used for parking shall not be counted in FAR.
v. Max. Height of stilt floor from finished floor to underside of beam shall be 2.5M.

g) Educational and Research Centre:

Minimum plot area should of 8 Hectares. Large campuses of universities, medical and engineering colleges and other education and research institutes shall be covered under these regulations. The campus will be divided into four parts and the regulations shall apply, as given below:

i) *Academic including Administration (45% of the total land area):*

Table 5.28: -

Max. Ground Coverage	30%
Max. FAR	120
Max. Height	No restriction subject to Air safety regulations, Traffic circulations, Fire Safety norms. Fire preparedness, Equipments available within Fire Department of that area, Structural Safety norms and Hazard Risk Vulnerability Assessment norms, and others etc.

ii) Residential (25% of the total land area):

This will be developed at a density of 400 PPH gross. The land shall be reserved for residential facilities @ 9.2 sqmt. per person. Sub-division regulations as given for group housing shall apply.

iii) Sports and Cultural Activities (15% of the total land area):

Table 5.29: -

Maximum Ground Coverage	10%
Maximum FAR	15%

iv) Parks and Landscape Areas (15%of the total land area):

Suitable landscape plan to be prepared for this area.

Table 5.30: -

Min. approach street (RoW)	25M
Front Set back	25M or1/2 of Ht. of building or building line of road whichever is more.
Rear and side setbacks	1/3rd of Ht. of building or 10M or building line of road whichever is more.

Parking:

i. For all types of educational institutions, parking @1.5 ECS for 100 Sqm of built up area shall be provided.

ii. Double basements below the ground floor and to the maximum extent of ground coverage shall be allowed and if used for parking and services should not be counted in FAR.

iii. Stilt floors within the building envelope shall be allowed and shall not be counted in FAR. Max. Height of stilt floor from finished floor to underside of beam shall be 2.5M.

Note:

In case of stilt floor (where ever allowed) if provided for parking, extra building height of 2.5 M shall be allowed.

Health

a) Hospital

Table 5.31: -

Minimum Plot Area	6000 Sqm
Maximum Ground Coverage	40% excluding 5% additional ground coverage for multi-level parking.

Maximum FAR

Table 5.32: - Permissible FAR for Hospitals

S.No	Right of Way (RoW)	FAR
1	RoW less than 24m	250
2	RoW 24m upto 30M	300
3	RoW 30M and above	375

Upto 25% FAR: Residential staff/ Dormitory/Hostel.
Maximum height: 50m
Front Set back: 12M or 1/3 of Ht. of building or Building line of road whichever is more
Rear and side setbacks:1/3rd of Ht. of building or 3M or Building line of road whichever is more.

Maximum 10% Ground coverage shall be allowed for providing atrium and shall be free from FAR. In case, additional ground coverage for atrium is utilized 25% of the utilized ground coverage shall be counted toward FAR.

Common areas such as waiting halls, reception and fire stair cases shall be allowed free from FAR.

Service floor of height 1.8m shall not be counted in FAR.

The setbacks / regulations are subject to fire safety norms.

Parking:

i. Parking standard @ 2.0 ECS/100 Sqm of floor area.
ii. Basements/stilt floors if used for parking shall not be counted in FAR.
iii. Max. Height of stilt floor from finished floor to underside of beam shall be 2.5M.
iv. Multi-Level Parking shall be Permissible to the extent of building Envelope lines, free from FAR and ground coverage to facilitate ample parking in spaces, subject to structural safety.

b) Health Centre/ Nursing Home:

Table 5.33: -

Minimum Plot Area	1000 Sqm
Maximum Ground Coverage	30%
Maximum FAR	100
Minimum approach road	12M
Height of building	No restriction subject to Air safety regulations, Traffic circulations, Fire Safety norms. Fire preparedness,

	Equipments available within Fire Department of that area, Structural Safety norms and Hazard Risk Vulnerability Assessment norms, and others etc.
Front Set back	6M or1/3rd of Ht. of building or building line of road whichever is more.
Rear and side setbacks	1/3rd of Ht. of building or 3M or building line of road whichever is more.

Multilevel basements within the building envelope shall be allowed as specified in the basement norms. Basements/Stilt floors if used for parking shall not be counted in FAR. Max. Height of stilt floor from finished floor to underside of beam shall be 2.5M. Parking shall be provided @ 2ECS for 100 Sqm.

Notes:

1. Plot area for all Hospital/Tertiary Health Care Centre would be worked out @ 80 sq.mt. of gross floor area per bed. However, for other health facilities like Maternity/Nursing homes, family Welfare and other centres, the plot area would be worked out @ 60 sq.mt. of gross floor area per bed.

2. Maximum up to 300 sq. mt. of floor area shall be allowed to be used for community space / religious shrine / crèche / chemist shop/ bank counter on Hospital sites and also Medical College/ Nursing and Paramedic institutes sites.

Other Controls:

a. In case of super specialty medical facilities/hospitals duly certified as such by the competent authority, the gross area shall be worked out @ upto 125 sq. mt. per bed.

b. In case of existing premises/sites, the enhanced FAR shall be permitted, subject to payment of charges as may be prescribed by the Authority / land owning agency and other clearances.

c. Basement after utilization for Parking; Services Requirements such as air conditioning plant and equipment, water storage, boiler, electric sub-station, HT & LT panel rooms, transformer compartment, control room, pump house, generator room; staff locker room, staff changing room, staff dining facilities without kitchen facility, Central sterile supply deptt., back end office; Other Mechanical Services; Installation of Electrical and firefighting equipment's; and other services like kitchen, laundry and radiology lab and other essential services required for the maintenance/functioning of the building may be used for healthcare facilities with prior approval of the concerned agencies.

d. Other controls related to basements etc. are given in end of this chapter.

e. The bed count of a Health Facility may be allowed as per permissible FAR
f. Environment clearances shall be made mandatory considering that bio-wastes are generated. Environment clearances are mandatory as per the prevailing regulations related to the environment.

g. Zero discharge for sewerage shall be enforced at the cost of the promoters and post treatment water can be used by premises for its needs of horticulture, flushing, coolant tower, washing or disposal to other construction sites. These issues concerned the local bodies and can be dealt accordingly as per existing regulations as the time of sanctioning the plan.

h. The additional power requirements shall be met by power supply from grid and till such time by means of suitable captive generation.

c) Radio Diagnostic Centre / Microbiological / Pathological Laboratories:

Table 5.34: -

Minimum Plot Area	500 Sqm
Maximum Ground Coverage	30%
Maximum FAR	100
Minimum approach road	12M (RoW)
Front Set back	6M or1/3rd of Ht. of building or building line of road whichever is more.
Rear and side setbacks	3M or building line of road whichever is more.
Height	No restriction subject to Air safety regulations, Traffic circulations, Fire Safety norms. Fire preparedness, Equipments available within Fire Department of that area, Structural Safety norms and Hazard Risk Vulnerability Assessment norms, and others etc.

Parking:

i. Single basement within the building envelope shall be allowed as specified in the basement norms.
ii. Stilt floors within the building envelope shall be allowed.
iii. Basements/Stilt floors if used for parking shall not be counted in FAR.
iv. Max. Height of stilt floor (from finished floor to underside of beam) shall be 2.5M.
v. Parking shall be provided @ 2ECS for 100 Sqm.

A- Facilities and Amenities:

i. Religious Premises:

Table 5.35: -

Minimum Plot Area	750 Sqm
Maximum Ground Coverage	35%
Maximum FAR	70
Maximum height	No restriction subject to Air safety regulations, Traffic circulations, Fire Safety norms. Fire preparedness, Equipments available within Fire Department of that area, Structural Safety norms and Hazard Risk Vulnerability Assessment norms, and others etc.
Minimum approach road	12M
Front Set back	Building line of road or 7.5m from the plot line whichever is more.
Rear and side setbacks	1/3rd of Ht. of building or 3M

Parking:

a) Stilt floor shall be allowed for parking. In case stilt floor is provided for parking, extra height of 2.5M shall be allowed.

b) Single basement within the building envelope shall be allowed as specified in the basement norms and if used for parking and services should not be counted in FAR.

c) Parking @ 1 ECS for 100 Sqm of Plot areas shall be provided.

ii. Police Post:

Table 5.36: -

Minimum Plot Area	250 Sqm
Maximum Ground Coverage	35%
Maximum FAR	100
Maximum height	No restriction subject to Air safety regulations, Traffic circulations, Fire Safety norms. Fire preparedness, Equipments available within Fire Department of that area, Structural Safety norms and Hazard Risk Vulnerability Assessment norms, and others etc.
Minimum approach road	12M
Front Set back	Building line of road or 7.5m from the plot line whichever is more.
Rear and side setbacks	1/3rd of Ht. of building or 3M

Parking:

a) Stilt floor shall be allowed for parking. In case stilt floor is provided for parking, extra height of 2.5 M shall be allowed.

b) Single basement within the building envelope shall be allowed as specified in the basement norms and if used for parking and services should not be counted in FAR.

c) Parking shall be provided @ 2ECS for 100 Sqm

iii. Police Station

Table 5.37: -

Minimum Plot Area	1000 Sqm
Maximum Ground Coverage	30%
Maximum FAR	150
Maximum height	No restriction subject to Air safety regulations, Traffic circulations, Fire Safety norms. Fire preparedness, Equipments available within Fire Department of that area, Structural Safety norms and Hazard Risk Vulnerability Assessment norms, and others etc.
Minimum approach road	12M (RoW)
Front Set back	Building line of road or 7.5m from the plot line whichever is more.
Rear and side setbacks	1/3rd of Ht. of building or 3M

Parking shall be provided @ 2ECS for 100 Sqm

Other Controls:

i) Basement upto the envelope lines and to the maximum extent of 50% of the plot area shall be allowed and if used for parking and services should not be counted in FAR.

ii) 25 % of the plot area may be used for housing the staff and the regulations of group housing shall be applicable to the area meant for housing

iv. Post & Telegraph Office/Bank

Table 5.38: -

Minimum Plot Area	250 Sqm
Maximum Ground Coverage	25%
Maximum FAR	100
Maximum height	No restriction subject to Air safety regulations, Traffic circulations, Fire Safety norms. Fire preparedness, Equipments available within Fire Department of that area, Structural Safety

	norms and Hazard Risk Vulnerability Assessment norms, and others etc.
Minimum approach road	12M (RoW)
Front Set back	Building line of road or 7.5m from the plot line whichever is more.
Rear and side setbacks	1/3rd of Ht. of building or 3M

Parking:

a) Stilt floor shall be allowed for parking. In case stilt floor is provided for parking, extra building height of 3 M shall be allowed.

b) Multi-level basements up to the building envelope line and to the maximum extent of 50% of the plot area shall be allowed and if used for parking and services should not be counted in FAR.

c) Parking shall be provided @ 2ECS for 100 Sqm.

v. General (Public & Semi Public Premises)

Table 5.39: -

Minimum Plot Area	500 Sqm
Maximum Ground Coverage	25%
Maximum FAR	100%
Maximum height	No restriction subject to Air safety regulations, Traffic circulations, Fire Safety norms. Fire preparedness, Equipments available within Fire Department of that area, Structural Safety norms and Hazard Risk Vulnerability Assessment norms, and others etc.

vi. Fire Station

Table 5.40: -

Minimum Plot Area	2000 Sqm
Maximum Ground Coverage	30%
Maximum FAR	120
Maximum height	No restriction subject to Air safety regulations, Traffic circulations, Fire Safety norms. Fire preparedness, Equipments available within Fire Department of that area, Structural Safety norms and Hazard Risk Vulnerability Assessment norms, and others etc.
Minimum approach road	12M (RoW)
Front Set back	Building line of road or 7.5m from the plot line whichever is more.
Rear and side setbacks	1/3rd of Ht. of building or 3M

Parking:

a. Parking shall be provided @ 2ECS for 100 Sqm.

b. Stilt floor shall be allowed for parking as per fire/safety standards of equipment.

c. In case stilt floor is used for parking, an extra building height equal to height of stilt floor shall be allowed.

d. Double basements within the building envelope shall be allowed as specified in the basement norms.

Other controls:

1. Upto 25% of maximum FAR can be utilized for residential use of essential staff in fire station.
2. Upto 15% of maximum FAR can be utilized for residential use/hostel for essential staff and student accommodation, in Fire Training Institute/College.
3. Other controls related to basements etc. are as per regulations.

5.6 Industrial use:

Cities with major thrust in manufacturing and production are industrial cities. Such a focus on manufacturing was initially in the beginning five year plans after independence, when the focus was on heavy iron and steel manufacturing. Industrialization again boosted after liberalisation in 1991 and encouraged developing clusters for export in 205 by the SEZ Act, 205, which provides for the establishment, development and management of the Special Economic Zones for the promotion of exports. There were also schemes proposed for promotion of cluster/park development by respective Ministries, while Small Scale Industry (SSI) was defined under Micro, Small & Medium Enterprises (MSMED) Act, 2006.

Lately, Government of India has also announced the National Manufacturing Policy in year 2011 with the objective to enhance the share of manufacturing in GDP and increasing employment. Under the National Manufacturing Policy, the New Investment and Manufacturing Zones (NIMZ) guidelines was cleared by the Cabinet in 2011.

Associated Issues

The following are the key concerns for industrial area planning:

Industrial cities are marked by high intensity of noise levels and air pollution levels, which makes unsuitable for residential. Also, improper discharge of liquid and solid industrial waste/effluents are concerns for health. These hazard prone activities have a direct impact on residential areas, Movement of heavy traffic for transportation or raw material and finished goods, large share of the traffic load on the roads (highways) & rail, Lack of supporting infrastructure such as logistics, warehousing, Industries face power problems with respect to unscheduled cuts, which affects the productivity, especially in the continuous process plants. In order to make up for production loss, industries have to operate DG sets which eventually

increase the overall production cost and air pollution, Lack of emergency facilities for fire safety and accidentals, including medical infrastructure and health care.

- Absence of integration with research and development and ICT infrastructure in Indian industrial cities,
- Unplanned infrastructure provisions for various utilities, both underground and on surface,
- Limited space for industrial plots, allowing no expansion in future.

Other issues associated with industrial township are:

- Issues of compatibility between processing and non-processing areas,
- Lack of alternative economic activities leading to stagnation of city growth,
- Some of the industrial towns also show high rate of crime. This is primarily due to segregation of classes, lack of recreational activities, lack of educational facilities for labour class, and to some extend due to a portion of the population is bachelor,
- Ignorance on the public transportation in the industrial areas for labour and managerial labour,
- Lack of housing for construction labour, who continue to live within and adjacent to the industrial cities for years and lack of housing requirements for low income labour and informal employment.

Planning Strategies

Site location of the industrial city is the prime aspect of its planning. The siting criteria shall satisfy the environmental requirements mentioned by Ministry of Environment and Forest, which is with sufficient buffers, distance from a large size town and agricultural land.

Land suitability analysis to be done for identifying zones for placing hazardous industrial (uses including air polluting units and wind directions), other manufacturing industrial, compatible uses along surface water bodies, hamlets and settlements and placing of non-processing areas. For locating industrial zone, preference to areas with easy connectivity provision for logistics and areas with existing industries to be given, also wind directions to be considered.
Zoning for processing and non-processing areas is recommended in the ratio of 40:60 (especially in SEZ). The land use regulations have to keep in view the requirements of both these areas according to the activities envisaged. Due to the health concerns and safeguards, provision of green buffers of minimum of 500 meters between compatible and non-compatible shall be well defined while zoning.

Processing area: may be comprise of the following activities:

- Industries/manufacturing:
- Ancillary & MSMEs;

- Retail Trade and commerce;
- Go-downs and warehousing;
- Utility corridor;
- Port and port related activities;
- Airport and related uses, rail, road and inland waterway and spaces for parking etc.;
- Incidental and other activities for safety and security; and essential residential for the same;
- Governmental use/activities to manage the proper functioning of such processing areas.
- Information Technology and Enabled Services;

Within the processing areas, space for informal commercial, service industries and parking as per industrial requirement to be paid attention. For development of various types of parks – like IT parks. Plastic parks, Bio-technology parks, Food parks, Agro park, etc. the policy and norms issued by respective departments and guidelines available to be considered for planning. In absence of such handholding provision, case studies of the specific industrial sector to be referred.

Cluster Development: A cluster approach may be taken to optimise use or resources and minimise cost of production. For example, all work related to computers, IT, Communication can be housed in a cluster at the outskirts of processing area to minimize heavy transportation within the city. Small clusters related to IT and communication can also be accommodated within the non-processing area at uniform distance for easy reach of availability of all services in time.

Non-processing areas: Areas other than processing area are to be planned for various uses and activities, mainly as an industrial township including residential, commercial, recreational and activities related to social infrastructure like education, healthcare, and socio-cultural facilities.

Social Infrastructure: The overall quantum of social infrastructure to be provided I the industrial township may be divided into two levels of facilities, including-industrial city level Facilities and Local Level Facilities.

Land Use: An industrial township should provide for a judicious mix of land uses/activities in such a way that it is not dependent on the neighbouring or other city. The norms and standards for distribution of land use may be as under.

Proposed Land Use Structure of Industrial towns

Table 5.41: - Land use structure for Industrial towns

Sl No.	Landuse Category	Percentage of Developable Area
1	Residential	20-25
2	Commercial	3-4
3	Industrial	30-35
4	Public and Semi-Public	6-8
5	Recreational	12-15
6	Transport and Communication (including Logistics)	10-12
7	Water bodies & special areas	Balance
Total		100

Note: *the above Landuse distribution is indicative, and may vary as per the size of SEZ, industrial town, and cluster development.*

Permitted uses/Activities

Residential building for essential staff and for watch and ward personal, all kind of industries, public utilities, parking, loading, unloading spaces, warehousing, storage, and depot of non-perishable and non-inflammable commodities and incidental use, cold storage and ice factory, gas go-downs, cinema, bus terminal, bus depot and workshop, wholesale business establishment, petrol filling stations with garage and service stations, parks and playgrounds, medical centers, restaurants.

Restricted uses / activities

Noxious, obnoxious and hazardous industries except storage of perishable and inflammable goods, junk yards, sports/stadium/playgrounds, sewage disposal works, electric power plants, service stations, cemeteries, government / semi-government / private business offices, bank and financial institutions, helipads, hospitals / medical centres, religious buildings, taxi stands, gas installations and gas works, animal racing or riding stables, workshops / garages, dairy and farming, quarrying of gravel, sand, clay or stone.

Prohibited uses / Activities

Residential dwellings other than those essential operational, service and watch & ward staff, schools and colleges, hotels, motels and caravan parks, recreational sports or centres, other non- industrial related activities, religious buildings, irrigated and sewage farms, major oil depot and LPG refilling plants, commercial office, educational institutions, social buildings.

a. Flatted Group Industry and Service Centre:

Table 5.42: -

Minimum Plot Area	2000 Sqm
Maximum Ground Coverage	30%
Maximum FAR	120%
Maximum height	No restriction subject to Air safety regulations, Traffic circulations, Fire Safety norms. Fire preparedness, Equipments available within Fire Department of that area, Structural Safety norms and Hazard Risk Vulnerability Assessment norms, and others etc.

Other Controls:

Basement upto the building envelop line to the maximum extent of 50% plot area shall be allowed and if used for parking and services should not be counted in FAR.

b. Light and Service Industry:

Table 5.43: -

S. No.	Plot Size (Sqm)	Max. Ground Coverage	FAR	Max. Height
1.	100 to 400	60%	125%	No restriction subject to Air safety regulations, Traffic circulations, Fire Safety norms. Fire preparedness, Equipments available within Fire Department of that area, Structural Safety norms and Hazard Risk Vulnerability Assessment norms, and others etc.
2.	400 to 4000	50%	125%	
3.	4000 to 12000	45%	125%	
4.	Above 12000	40%	100%	

Other Controls:

i Maximum floors allowed shall be basement, ground floor and 1st floors; basement should be below ground floor and to the maximum extent of ground coverage shall be counted in FAR. In case the basement is not constructed, the permissible FAR can be achieved on the second floor.

ii In case of truss, height of building should be adjusted/ relaxed.

iii Parking shall be provided @ 2 ECS for 100 Sqm of built-up area

c. Extensive Industry (Medium & Large Industry):

Table 5.44: -

S. No.	Plot Size (Sqm)	Max. Ground Coverage	FAR	Max. height (m)

1.	400 to 4000	50%	100%	No restriction subject to Air safety regulations, Traffic circulations, Fire Safety norms. Fire preparedness, Equipments available within Fire Department of that area, Structural Safety norms and Hazard Risk Vulnerability Assessment norms, and others etc.
2.	4000 to 12000	45%	90%	
3.	12000 to 28000	40%	80%	
4.	28000 & Above	30%	60%	

Note:

i) Single Storey building with basement is allowed. Basement shall be below the ground level and the maximum extent of the ground coverage and shall not be counted in FAR.

ii) In case of truss, height of building should be adjusted/ relaxed.

iii) Height relaxation can be considered by the competent authority for specialized industries requiring more height.

iv) Parking shall be provided @ 2 ECS for 100 Sqm of built-up area

5.7 Recreational Use Zone (P)

Permitted uses/Activities

Regional parks, district parks, playgrounds, children traffic parks, botanical/zoological garden, bird sanctuary, clubs, stadiums (indoor), outdoor stadium with / without health centre for players and staff, picnic huts, holiday resorts, shooting range, sports training centres, specialized parks / maidans for multiuse, swimming pool, special recreational and special educational areas, library, public utilities.

Restricted uses / activities

Buildings and structures ancillary to use permitted in open spaces and parks such as stand for vehicles on hire, taxis and scooters, bus and railway passenger terminals, facilities such as police post, fire post, post and telegraph office, commercial use of transit nature like cinema, circus and other shows, public assembly halls, restaurant and caravan parks, sports stadium, open air cinemas.

Prohibited uses / Activities

Any building or structure which is not required for open air recreation, dwelling unit except for watch and ward personal and uses not specifically permitted therein.

5.8 Primary Activity Use Zone

Permitted uses/Activities

Dwellings for the people engaged in the farm (rural settlement), farm houses and accessory buildings, agriculture, horticulture and forestry, poultry, dairy farm, cottage industries, storage, processing and sale of farm produce, petrol and other fuel filling stations, fishing, public utility and facility buildings.

Restricted uses / activities

Brick kilns, sewage disposal works, electric power plant, quarrying of gravel, sand, clay and stone, service industries, school and library, temples, churches, mosques, and other religious buildings, piggeries, milk chilling stations and pasteurization plants.

Prohibited uses / Activities

Residential use except those ancillary uses permitted in agricultural use zone, heavy, extensive, noxious, obnoxious and hazardous industries, any activity which is creating nuisance and is obnoxious in nature.

5.9 Transport and Communication Use Zone (T)

Permitted uses/Activities

Road transport terminals (bus terminals and depots), goods terminals, parking areas, circulations, airports-building and infrastructure, truck terminal, motor garage, workshop, repair and repair shop and facilities such as night shelter, boarding house, banks, restaurants, booking offices, transmission centre, wireless station, radio and television station, observatory and weather office.

Restricted uses / activities

Any other use / activity incidental to transport and communication, residential dwelling units for essential staff and watch and ward personal.

Prohibited uses / Activities

Use / activity not specifically permitted herein. In vicinity of airports: butcheries, tanneries and solid waste disposal sites shall be prohibited within 10 km from the Aerodrome reference Point (ARP).

Non- Residential Premises:

i) Hostel

Includes-Old Age Home/ Care Centre for Differently Abled Persons / Mentally Challenged/ Working Women/ Men Hostel/ Adult Education Centre/ Orphanage/ Children's Centre/ Night Shelter.

Table 5.45: -

Min. Plot Area	750 Sqm
Minimum approach road	12M (RoW)
Maximum Ground Coverage	30%
Maximum FAR	120
Maximum Height	No restriction subject to Air safety regulations, Traffic circulations, Fire Safety norms. Fire preparedness, Equipments available within Fire Department of that area, Structural Safety norms and Hazard Risk Vulnerability Assessment norms, and others etc.

Parking

a) Stilt floor shall be allowed for parking. In case stilt floor is provided for parking, extra building height of 2.5 M shall be allowed.

b) Single Basement up to the building envelope line and to the maximum extent of 50% of the plot area shall be allowed and if used for parking and services should not be counted in FAR.

c) Parking shall be provided @ 1.5 ECS for 100 Sqm.

ii) Guest House, Boarding House and Lodging House

Table 5.46:-

Minimum Plot Size	500 Sqm.
Maximum ground Coverage	30%
Maximum FAR	120
Maximum Height	No restriction subject to Air safety regulations, Traffic circulations, Fire Safety norms. Fire preparedness, Equipments available within Fire Department of that area, Structural Safety norms and Hazard Risk Vulnerability Assessment norms, and others etc.
Minimum approach road	12M (RoW)
Front Set back	Building line of road or 6m from the plot line whichever is more.
Rear and side setbacks	1/3rd of Ht. of building whichever is more

Parking

a) Basement upto the building envelope to the maximum extent of 50% of plot area shall be allowed and if used for parking and services should not be counted in FAR.

b) Stilt floor shall be allowed for parking. In case stilt floor is provided for parking, extra building height of 2.5 M shall be allowed.
c) Parking @ 2 ECS for every 100 Sqm shall be provided.

5.10 Petrol Pump

General Conditions of Siting

The fuel stations shall generally be a part of the rest area complex along the highways. Rest areas should have various amenities for users e.g. places for parking, toilets, restaurants, rest rooms, kiosks for selling sundry items, bathing facilities, repair facilities, crèche etc. These aspects should be incorporated while planning for improvement and up gradation of highways and/or planning for new fuel stations along the highways. The rest area complex can be planned subject to their commercial viability.

It should be ensured that the location of the proposed fuel station does not interfere with future improvements of the highway and the nearby intersections/junctions.

The fuel stations would be located where the highway alignment and profile are favourable i.e. where the grounds are practically level, there are no sharp curves not less than those specified for minimum design speed or steep grades (more than 5%) and where sight distances would be adequate for safe traffic operations. The location would not interfere with placement and proper functioning of highways signs, signals, lighting or other devices that affect traffic operation.

While considering the proposal for new fuel stations it would be ensured that the fuel stations on a corridor are well distributed on both sides of the highways so that vehicles normally do not have to cut across the traffic to reach them. The fuel stations would be serving only the traffic moving on the adjacent lane. For the vehicles travelling in the lanes in opposite direction, separate fuel stations need to be planned for which permission would be considered keeping also in view of its location and distance norms. In urban areas with population more than 2 million, fuel stations will not be allowed to be set up within the municipal limits along the National Highways even though with service roads, as there can be located on side roads for local traffic.

In order to provide safe length for weaving of traffic, fuel stations along National Highways shall be located at the minimum distance from an intersection (gap in the central median be treated as intersection) as given below. For single carriageway section, these minimum distances would be applicable for both sides. All the distances shall be measured between the tangent points of the curves of the side roads at intersections / the median openings and the access/egress roads of the fuel stations, as is applicable, in a direction parallel to the centre line of the nearest carriageway of the National Highway.

Table 5.47: -
Non-Urban (Rural) stretches

1.	Plain and Rolling Terrain	Distance
(i)	Intersection with NHs/SHs/MDRs/City Roads	l000 m
(ii)	Intersection with Rural Roads/approach roads lo private and public properties	300 m
2.	Hilly/Mountainous Terrain	
(i)	Intersection with NHs/SHs/MDRs	300 m
(ii)	Intersection with all other roads and tracks	100 m

Table 5.48: -
Urban Stretches

I.	Plain and Rolling Terrain	Distance
(a)	Urban Area with population of more than 20,000 and less than one lakh.	
1.	Intersection with any category of roads of carriageway width of 3.5 m and above.	300 m
(i)	Intersection with roads of carriageway width of less than 3.5 m	100 m
B	Urban Area with population of one lakh and above.	
(i)	Intersection with any category of road (irrespective of carriageway width)	100 m
II.	Hilly and Mountainous terrain.	
(i)	Intersection with any category of road (irrespective of carriageway width)	100 m

There shall not be any median gap on a divided carriageway within a distance of 300 m on each side of the fuel station. This minimum distance i.e. 300 m shall be measured between the start of the median gap and the nearest tangent point of access/egress road of the fuel station, as is applicable, in a direction parallel to the centre line of the nearest carriageway of the National.

This stipulation shall be applicable for such median gaps, which are located neither in front of nor in proximity of any intersection or intersecting roads.

The minimum distance between two fuel stations along the National Highway would be as given below:

Table 5.49: -

A	Plain and rolling terrain in non-urban (rural) areas	Distance
(i)	Undivided carriageway (for both sides of carriageway)	300m (including deceleration And acceleration lanes).
(ii)	Divided carriageway (with no gap in median at this location and stretch)	1000m (including deceleration And acceleration lanes).
B	Hilly/mountainous terrain and urban stretches	
(i)	Undivided carriageway (for both sides of carriageway)	300m (clear)
(ii)	Divided carriageway (with no gap in median at this location and stretch)	300m (clear)

***Note**: -*

(i) The minimum distance of 300 m between two fuel stations on both sides of the highway is applicable for undivided carriageway only. In case of divided carriageway, with no gap in medians, the distance restriction is not applicable on the opposite side of the fuel station and the minimum distance between two fuel stations on the same side shall be 1000 m unless the access is through service road. Any deviation will be considered as clustering. In such a case, service road shall be provided and entry/exit point of the service road shall meet the requirements specified for acceleration/deceleration lanes.

(ii) The distance between the fuel stations shall be measured between the tangent points of the access/egress roads of the fuel stations, as is applicable, in a direction parallel to the centre line of the nearest carriageway of the National Highway.

If two or more fuel stations are to be sited in close proximity for some reasons these would be grouped together to have a common access through a service road of 7.0m width and connected to the highway through acceleration, deceleration lanes. From these considerations, the permission for the new fuel stations would be considered only if it is either in proximity to the existing one so that the common access can be provided or the new one located at a distance of more than 1000m. Any objection from the existing fuel station owner against granting of access permission from NH for the proposed new fuel station are to be overruled and access to all fuel stations in case of clustering, shall invariably be from the service road only. Wherever longer service e road exists which itself may act as deceleration/acceleration lane, no separate deceleration/acceleration lane is required.

For installation of new fuel station within the 1000m distance of existing fuel station in plain/rolling terrain and 300 m in hilly/mountainous terrain and urban stretch, new entrant would

be responsible for construction and maintenance of the common service e road, deceleration & acceleration lanes, and drainage and traffic control devices. Wherever, available ROW is inadequate to accommodate such service roads, de-acceleration/acceleration lanes, etc. the additional land by the side of ROW to accommodate such service roads shall also be acquired by the new entrant oil company. In case of hilly/mountainous terrain, common service roads at all such locations may not be possible as per the site conditions and, therefore, common access through service roads would not be a pre-condition.

The fuel station would not be located within the distance of 1000m from any barrier including that of toil plaza and railway level crossing. No check barrier/toll plaza should be located within 1000m of a fuel station. However, if such barriers are located on service roads only and are separated from the main carriageway, then this requirement shall not apply. Fuel stations should be located at a minimum distance of 200 m and 500 m from the start of an approach road of a Road Overbridge (ROB) and the start of a grade separator or a ramp respectively.

Plot size for fuel station.

The minimum size and shape of the plot for the fuel station would need to be such that it suitable accommodates fuel pumps, offices, stores, compressor room, air pump and kiosks without causing any hindrance to the movement of vehicles of expected maximum dimensions, within fuel stations and in the access area. Sufficient space would need to be available to accommodate the number of fuel pumps to cater to the expected number of vehicles in peak time at this location so that the vehicles do not spill on to the access area. The air pump and kiosks for pollution control measurement be installed at some distance from the fuel pumps so that the vehicles requiring these services do not cause hindrance to the free movement of vehicles entering or existing for refuelling.

From these considerations, the minimum size of the plot for fuel stations along National Highway shall be as follows:-

Table 5.50: -

S.No.		Frontage (in meter)	Depth (in meter)
(i)	On undivided carriageway in plain and rolling terrain	35	45
(ii)	On divided carriageway in plain/rolling terrain	35	45
(iii)	In hilly and mountainous terrain	20	20
(iv)	In urban stretches	20	20

Note: *The proposed plot of new fuel stations should be such that the minimum plot size stipulated as above can be accommodated.*

For fuel station being part of the rest area complex, the area required for other facilities such as parking, restaurant, rest rooms, toilets, kiosks for selling sundry items, bathing facilities, repair facilities, shops etc. would be extra but there would be a single access/egress.

Access Layout

Access for New Fuel Stations along Un-divided Carriageway Sections

The access to the fuel stations along un-divided carriageway sections of National Highway shall be through deceleration and acceleration lanes. The deceleration and acceleration lanes may be dispensed with for the fuel stations located along urban roads and roads in hilly and mountainous terrain. The access to the fuel stations roads and roads in hilly and mountainous terrain. The access to the fuel stations located on National Highways with service road shall be only through that service road.

The deceleration lane would take off from the edge of the paved shoulder taken up to the edge of the Right of Way (ROW) of National Highway, beyond which, the boundary of fuel station shall start. Its minimum length would be 70 m measured along the travelled direction of highway. Its width would be minimum 5.5 m. The shoulder of 2.25 m would be provided towards the outer side of the access/egress (i.e. on the side farthest from the carriageway) for this deceleration lane.

The acceleration lane would take off from the edge of the fuel station on exit side having minimum length of 100 m with parallel type layout. Its starting stretch of 70 m length would be with a curvature of minimum radius of 650 m and the remaining 30 m length would be tapered so as to facilitate vehicles coming out of fuel station, merging with fast moving through traffic on main carriageway, in a safe and efficient manner. Wherever, available ROW is inadequate to accommodate the service roads and/or deceleration/ acceleration lanes in plain and rolling terrain of non-urban stretches, the additional marginal land by the side of ROW to accommodate the deceleration/acceleration lanes shall be acquired by the owner of the fuel station. In cases of widening to 4/6 lanes in near future, the matter shall be dealt on case to case basis.

A separator Island would be provided in front of the fuel station so that no right turning takes place. The length of this separator island would be determined on the basis of the intersecting points of the edge line of the separator island with the line drawn along the edge of chevron markings. It would have minimum width of 3m. The width of approaches connecting deceleration and acceleration lanes, along the separator island should be 5.5m.

There would be buffer strip from the edge of the ROW and would extend minimum 3 m inside the fuel station plot. Its minimum length would be 12m. In urban/hilly or mountainous areas, minimum length of buffer strip may be reduced to 5m keeping minimum width of opening at

entry and exit to 7.5m. No structure or hoarding except the approved standard identification sign on pole would be permitted, which may be provided outside the ROW. The buffer strip as well as the separator island would be provided with kerb of minimum 275 mm height to prevent vehicles from crossing it our using it for parking purposes. The buffer strip in the approach zone should be suitable shaped to cover extra area in the approach zone after provision of acceleration, deceleration lane and connecting approaches and should be properly turfed for aesthetic landscaping.

The radius for turning curve would be 13m and that for non-turning curve be from 1.5 to 3m so as to check over speeding while entering or existing the fuel station. Wherever, available ROW is inadequate, the additional marginal land by the side of ROW shall be acquired by the owner of the fuel station to provide prescribed turning radius.

The pavement of the access roads including deceleration, acceleration lanes and connecting approaches would have sufficient strength for the expected traffic for the designed period. It would have minimum pavement composition of 150 mm thick Granular Sub Base (GSB) overlaid by three layers of Water Bound Macadam (WBM) (other than WBM-Grading No. 1), each of 75 mm thickness topped by 50 mm thick Bituminous Macadam (BM) and 25 mm thick Semi Dense Bituminous Carpet (SDBC). Interlocking Concrete Blocks as per IRC: SP: 63 can also be considered.

Access for New Fuel Stations on Divided Carriageway Sections.

The access to the fuel station on divided carriageway sections of National Highway shall be through deceleration and acceleration lanes.

The deceleration lane would take off from the edge of the paved shoulder and taken upto the edge of ROW, from where the boundary of fuel station would start. Its length would be 70 m, measured along the travel direction on the highway. The acceleration lane would be of 100 m length. Its starting stretch of 70 m length would be with a curvature of minimum radius of 650 m and the remaining 30 m tapered so as to facilitate vehicles coming out of fuel stations, merging with fast moving through traffic on main carriageway in a safe manner. The width of deceleration and acceleration lane shall be 5.5 m with shoulder of 2.25 m. The shoulder shall be provided towards the outer side of the access/egress (i.e. on the side farthest from the carriageway). Wherever, available ROW is inadequate to accommodate the service roads and/or deceleration/acceleration lanes in plain and rolling terrain of non-urban stretches, the additional marginal land by the side of ROW to accommodate the deceleration/acceleration lanes shall be acquired by the owner of the fuel station. In cases of widening to 4/6 lanes in near future, the matter shall be dealt on case to case basis

A separator Island would be provided in front of the fuel station. The length of this Separator Island would be determined on the basis of the intersecting points of the edge line of the Separator Island with the line drawn along the edge of chevron markings. It would have minimum width of 3 m. The width of approaches connecting deceleration and acceleration lanes along Separator Island should be 5.5 m.

There would be buffer strip from the edge of the ROW and would extend minimum 3 m inside the fuel station plot. Its minimum length would be 12 m. In urban/hilly or mountainous areas, minimum length of buffer strip may be reduced to 5 m keeping minimum width of opening at entry and exit to 7.5 m. No structure or hoarding except the approved standard identification sign on pole would be permitted, which may be provided outside the ROW. The buffer strip as well as the Separator Island would be provided with kerb of minimum 275 mm height to prevent vehicles from crossing it our using it for parking purposes. The buffer strip in the approach zone should be suitable shaped to cover extra area in the approach zone after provision of acceleration, deceleration lane and connecting approaches and should be properly turfed for aesthetic landscaping.

The radius for turning curve would be 13 m and that for non-turning curve be from 1.5 to 3 m so as to check over speeding while entering or existing the fuel station. Wherever, available ROW is inadequate, the additional marginal land by the side of ROW shall be acquired by the owner of the fuel station to provide prescribed turning radius.

The pavement of the access roads including deceleration, acceleration lanes and connecting approaches would have sufficient strength for the expected traffic. It would have minimum pavement composition of 150 mm thick Granular Sub Base (GSB) overlaid by three layers of Water Bound Macadam (WBM) each of 75 mm thickness (other than WBM-Grading No. 1), topped by 50 mm thick Bituminous Macadam (BM) and 25 mm thick Semi Dense Bituminous Carpet (SDBC). Interlocking Concrete Blocks as per IRC: SP: 63 can also be considered.

Drainage

There shall be adequate drainage system on the access to the fuel station and inside its area so as to ensure that surface water does not flow over the highway or any water logging takes place. For this purpose, the fuel station and access area would be at least 300 mm below the level at the edge of the shoulder on the highway. The surface water from fuel station and access road would need to be collected in a suitable underground drainage system and led away to a natural curse through culvert. Only slab culvert with iron grating of adequate strength shall be constructed in the approaches so that surface water is drained through the openings in the grating. Construction of Pipe culverts shall not be permissible for this purpose. The drainage arrangement would be either by the method mentioned above or as per the satisfaction of the Highway Administration/Ministry. The applicant has to prepare separate

detailed drawings indicating the drainage arrangements and to be submitted along with the application for permission.

Enforcement of Right of Way and Building Line

While planning the layout for various facilities inside the fuel stations, it has to be ensured that fuel pumps are located beyond the Building Lines as prescribed in IRC : 73, 'Geometric Design Standards for Rural (Non-Urban) Highways' and Fuel Station office building etc. at a safe distance as prescribed by Fire Department or other authorities. The buffer strip would extend minimum 3 m inside the Fuel Station plot, beyond the available ROW. The future widening of the highway shall also be kept in view while setting up and preparing the layout plan of the proposed fuel station. The ROW for this purpose shall be the maximum of the actual available ROW at site at the proposed location and the ROW prescribed in IRC: 73 brought out above. The owner of the fuel station shall acquire additional land, if required, to accommodate access/egress roads for fuel stations, service roads, acceleration/deceleration lanes, etc.

System for Signs and Markings

An adequate system for signs and marking would be provided at the locations of fuel stations for the guidance of the highway users. The pavement markings would be in the form of chevron at entry and exit locations, give way for the exit from the fuel station. Information sign for fuel station would be provided at 1 km ahead, 500 m ahead and at the entry point.

On undivided carriageway, additional signs for the regulation of entry and exit of the vehicular traffic, should be provided on the separator island. Also, an information sign should be installed showing the distance of the nearest Fuel Station located in the direction of travel in order to avoid any need for right turnings for accessing the Fuel Station located on the opposite side. This sign should be installed at a location of about 200 m ahead of the opposite side fuel station.

The pavement markings would conform to **IRC: 35, 'Code of Practice for Road Markings'** and the Road Signs to **IRC: 67, 'Code of Practice for Road Signs**' and **IRC: SP: 55, 'Guidelines on Safety in Road Construction Zones'**.

These should be as per Section 801 and 803 of Ministry's Specifications for Road and Bridge Works, as updated from time to time.

5.11 Other Controls:

a) Filling cum Service Station (Size 30 mts. x 36 mts. And above.)

Table 5.51: -

i.	Ground Coverage	20 %
ii.	FAR	20%
iii.	Max. Height	6 mts
iv.	Canopy Equivalent to permissible ground coverage within setback line	
v.	Front Setback.	6 mts (min) or B/L whichever is more

b) Filling Station (Size 30 mts x 17 mts

Table 5.52: -

i.	Ground Coverage	10 %
ii.	FAR	10%
iii.	Max. Height	6 mts
iv.	Canopy line	Equivalent to permissible ground coverage within setback
v.	Front Setback	3 mts (min) or b/l whichever is most

c) Compressed Natural Gas (CNG) Mother Station

Table 5.53: -

i.	Plot Size (minimum)	36 mt. x 30 mt.
ii.	Max. Ground Coverage	20 %
iii.	Max. Height	4.5 mt. (Single Storey)
iv.	Building Component	Control room /office /dispensing room, Store, Pantry and W.C

d) Other Regulations:

i. Shall be accepted to explosive /Fire Deptt.

ii. Ground Coverage will exclude canopy area

iii. Mezzanine if provided will be counted in FAR

iv. Whenever the plot is more than 33 mt x 45 mt. development norms shall be restricted to as applicable to the size i.e. 33 mt x 45 mt both in urban and rural areas.

5.12 Other Regulations

Lands Having High Slope

No building, whether residential, commercial or institutional shall be allowed on lands with more than 30% slope.

5.13 Mezzanine Floor

Mezzanine area shall be considered in computation of Floor Area Ratio.

5.14 Basement

i) Minimum plot area required for basement for the purpose of parking, with respect to number of basement levels is as mentioned under:

- Two level Basement- Min. Plot area of 2000 sq.mtr.
- Three level Basement- Min. Plot are of 4000 sq.mtr.

ii) The basement, if not meant for parking, shall be permitted up to one level irrespective of the size of plot. No residential space i.e. apartment/ flats/ residential house/ hotel rooms shall be allowed in any kind of basement. Area of basements not used for parking and building services shall be considered in computation of FAR.

iii) No habitable use shall be permitted in the basement. Permitted uses in Basement are: parking, safe deposit vault, A.C. Plant, storage other than inflammable material, other utilities.

iv) Front setback line to be considered for basement for parking purpose shall be minimum 6.0 mtr. from the plot line or building line of the abutting road whichever is more.

v) Setbacks on other sides to be considered for basement for parking purpose shall be as under.

Table 5.54: -

In case of one storey (1 level) basement	3.0 mt
In case of two storey (2 level) basement	4.5 mt.
In case of three storey (3 level) basement	6.0 mt.

vi) Basement shall be permitted under common plot, internal Road and internal marginal space for exclusive use of parking only.

vii) Basement if used for parking and utility services shall not be considered in computation of FAR.

viii) The basements shall be allowed within building envelope in individual residential houses.

ix) The basements shall be allowed maximum upto 75% of plot area for parking and services only.

x) Every basement shall be in every part at least 2.4 m in height from the finished floor to the underside of the beam.

xi) Adequate ventilation shall be provided for the basement. The ventilation requirements shall be the same as required by the particular occupancy according to byelaws. Any deficiency may be met by providing adequate mechanical ventilation in the form of blowers, exhaust fans, air-conditioning systems, etc;

xii) The minimum height of the ceiling of any basement shall be 0.9m and the maximum, 1.2 m above the average surrounding ground level;

xiii) Adequate arrangements shall be made such that surface drainage does not enter the basement;

xiv) The walls and floors of the basement shall be watertight and be so designed that the effects of the surrounding soil and moisture, if any, are taken into account in design and adequate damp proofing treatment is given; and

xv) The access to the basement shall be separate from the main and alternative staircase providing access and exit from higher floors.

xvi) Where the staircase is continuous in the case of buildings served by more than one staircase, the same shall be of enclosed type serving as a fire separation from the basement floor and higher floors.

xvii) Basement shall be permitted within the setback lines subject to clearance from local bodies/departments concerned, Municipal Corporation and Fire Department. In case basement is to be allowed where there are no setbacks, single basement should be permitted after leaving 3 m from plot boundary.
xviii) Ramps shall be allowed in setbacks subject to maintenance of unhindered setbacks of 6M with adjacent property.

xix) The ramp to basement and parking floors shall not be less than 7.2m wide for two way traffic and 4 m wide for one way traffic, provided with Gradient of 1:10 for cars and 1:15 for heavy vehicles. At curved portions of the ramp or for circular ramps the slope should not be more than 1:12.

xx) All structural design/safety aspects as per latest **BIS Codes & National Building Code 2016** or its latest version, shall be complied along with consideration of weight of Fire Engine & its manoeuvrings.

xxi) The minimum width of the ramps in hospitals shall be 2.4 m for stretcher and not for vehicular movement. In this case Handrails shall be provided on both sides of the ramp.

xxii) Ramps shall lead directly to outside open space at ground level or courtyards or safe place.

xxiii) Area not more than 15% of carpet area of basements shall be allowed as free from FAR for services like plant rooms/machine rooms etc. (excluding storages not incidental to running of machinery).Basements if used for Parking shall not be counted in FAR.

5.15 Stilt Floors

a. Stilt floors shall be allowed wherever mentioned within the building profile only. However the structural engineer will have to certify that the building is structurally safe for the given seismic zone.
b. Height of stilt floor shall not be more than 2.5M from finished floor upto the underside of beam.
c. Stilt floors shall be used for parking only and shall not be counted in FAR.
d. Where ever stilt floor is allowed and provided for parking only, extra height of building of 2.5M shall be allowed.

5.16 Parking Norms

Table 5.55: -

Basement	32 Sqm per ECS
Stilts	28 Sqm per ECS
Open/Surface	23 Sqm per ECS

For calculation of parking two wheeler shall be calculated equal to 0.25 ECS

5.17 Safety against Natural Disasters like Earthquakes

The application for seeking building permit shall be accompanied with a report of Architect/Structural Engineer certifying that the proposed structure has been designed structurally keeping in view the safety measures against earthquakes as indicated in the following **Bureau of Indian Standards (B.I.S)**.

Table 5.56: -

List of Codes Published by CED 39 (Earthquake Code Committee) of Bureau of Indian Standards				
Sr. No	**Code No**	**Year of Revised Publication**	**Year of Reaffirmation**	**Title**
1	IS 13935	2009	2014	Seismic Evaluation, Repair and Strengthening of Masonry

				Buildings- Guidelines
2	IS 1893 : Part 1	2016		Criteria for Earthquake Resistant Design of Structure - Part 1 : General Provisions and Buildings
3	IS 4326	2013		Earthquake resistant design and construction of buildings- Code of practice
4	IS 13920	2016		Ductile Design and Detailing of Reinforced Concrete Structures Subjected to Seismic Force - Code of Practice (First Revision)
5	IS 13827	1993	2013	Improving earthquake resistance of earthen buildings - Guidelines
6	IS 13828	1993	2013	Improving earthquake resistance of low strength masonary buildings - Guidelines
7	IS 1893 : Part 2	2014		Criteria for Earthquake Resistant Design of Structures- Part 2 Liquid Retaining Tanks
8	IS 1893 : Part 3	2014		Criteria for Earthquake Resistant Design of Structures Part 3 Bridges and Retaining Walls
9	IS 1893 : Part 4	2015		Criteria for Earthquake Resistant Design of Structures Part 4 Industrial Structures Including Stack - Like Structures (First Revision)
10	IS 4967	1968	2015	Recommendations for Seismic instrumentation for river valley projects
11	IS 4991	1968	2013	Criteria for blast resistant design of structures for explosions above ground
12	IS 6922	1973	2013	Criteria for safety and design of structures subject to underground blasts

5.18 Water Harvesting

Water harvesting by way of storage of rainwater in all new buildings existing on plots of 1000 sq. mtr. and above, and all group housing shall be mandatory. The plans submitted to the local authority shall indicate the system of storm water drainage along with points of collection of rain water in surface reservoirs or in recharge wells (*Refer Chapter 9*).

5.19 Fire Protection and Fire Requirements

A) Scope:

This part covers the requirements of the fire protection for the multi-storied buildings (high rise buildings) and the buildings which are of 15 mtr. and above in height and low occupancies of categories such as Assembly, Institutional, and Educational more than two storeyed and built-up area exceeds 1000 sq.mt. Business where plot area exceeds 500 sq. mt., Mercantile where aggregate covered area needs 750 sq.mt., Hotel, Hospital, Nursing Homes, Underground complexes, Industrial storage, Meeting/Banquet halls Hazards Occupancies.

B) Fire protection requirements:

Buildings shall be planned, designed and constructed to ensure fire safety and this shall be done in accordance with **Part IV Fire protection of National Building Code of India**. The building schemes as such also be cleared by the District Officer of the Fire and Emergency Services Department before issuance of building permit.

5.20 Mulba Stacking

In cases of plots falling under any land use approved under the Master Plan, stacking of building materials shall be done within the plot premises if the plot area is above 500 sq. mtr. An undertaking for not stacking of materials on the adjoining Govt. land i.e. Road, land etc. but the same shall be removed on weekly basis by the applicant. If the same is not done the local authority shall remove the mulba and the cost on this account shall be borne by the plot owner.

5.21 Completion Certificate:

(a) The local authority through their designated officer shall on receipt of the notice of completion get the work inspected and communicate the approval or refusal or objection there to in within 30 days from the receipt of notice of completion for residential building and 60 days for other buildings.

(b) In case of commercial buildings more than 200 Sq.ft plinth area over G+1, the work shall also be subject to the inspection of the Chief Fire Officer, and the Completion certificate shall be issued by the Authority only after the clearance from Chief Fire Officer regarding the completion of work from the fire protection point of view.

(c) If nothing is communicated within this period, it shall be deemed to have been approved by the Authority for occupation provided the fact is immediately brought to the notice of Authority in writing by the person, who had given the notice and has not received any intimation from the Authority within 15 days, where the completion certificate is refused, the reason shall be intimated for rejection at the first instance itself.

5.22 Sewer/ Water/ Electricity Connection:

No permanent connection of the water, sewer line and power shall be given to the building by the concerned agencies unless completion certificate has been issued by the approving authority.

Temporary connection for water, electricity or sewer can be permitted only for the purpose of facilitating the construction. Such temporary connections shall not be allowed to continue in the premises without obtaining Completion certificate. Validity of the temporary connection shall be only for a period of two year or completion of construction whichever earlier.

Provision related to activities on open plots

- Commercial activities including open parking in open/vacant plots must seek proper permission.
- Temporary Jhuggis shall be allowed on open plots having proper sanitation, drainage disposal system and water/electric connections.

5.23 Dwelling units or farmhouses in Urban Agriculture

Plot Area: Minimum 4000 sq. mts

Table 5.57: -

Minimum approach road (RoW)	20 M
Max. Ground Coverage	10%
Max. FAR	0.2
Min. Rear and Both Side Setback	4m
Max. Height	8.0m

Set Backs:

Front set back shall be min 15M or Building line of the road whichever is more. In case more than one road is abutting the site, building line of the roads should be maintained.

Parking:

i. Parking shall be provided @ 2.0 ECS for 100 Sqm of built-up area.
ii. Basements shall not be allowed.
iii. Mezzanine floor if constructed shall be counted in FAR.

CHAPTER – 6

SPACE REQUIREMENT FOR DIFFERENT PARTS OF BUILDING

6.1 Main building

The plinth of any part of a building or house shall be located with respect to average road level of site so that adequate drainage of the site is assured but not at a height less than 45 cm.

6.2 Interior courtyards, covered parking spaces and garages.

These shall be raised at least 15cm above the surrounding ground level and shall satisfactorily drained.

6.3 Habitable room size and width

The minimum size and width shall be as given in table 6.1.

Table 6.1: -

Minimum Size & Width of Different Components of Residential Premises:

S. No.	Component of Building	Min. Requirement for Plots upto 50 Sq. mt.		Min. Requirement for Plots above 50 Sq. mt.	
1	Habitable Room	Area Width Height	7.50 Sq. mt. 2.10 mt. 2.75 mt.	Area Width Height	9.50 Sq. mt. 2.40 mt. 2.75 mt.
2	Kitchen	Area Width Height	3.30 Sq. mt. 1.50 mt. 2.75 mt.	Area Width Height	4.50 Sq. mt. 1.50 mt. 2.75 mt.
3	Pantries	Area Width Height	not applicable not applicable not applicable	Area Width Height	3.00 Sq. mt. 1.40 mt. 2.75 mt.
4	Bathroom	Area Width Height	1.20 Sq. mt. 1.00 mt. 2.20 mt	Area Width Height	1.80 Sq. mt. 1.20 mt. 2.20 mt.
5	W.C	Area Width Height	1.00 Sq. mt. 0.90 mt. 2.20 mt	Area Width Height	1.10 Sq. mt. 0.90 mt. 2.20 mt.
6	Combined with Bath and W.C	Area Width Height	1.80 Sq. mt. 1.00 mt. 2.20 mt	Area Width Height	2.80 Sq. mt. 1.20 mt. 2.20 mt.
7	Store	Area Width Height	No Restriction No Restriction 2.20 mt	Area Width Height	No Restriction No Restriction 2.20 mt
8	Projections	Permitted within the setbacks upto		Permitted within the setbacks	

		0.75mt width	upto 0.75mt width
9	Garage	---	Area 14.50 sq. mt. Width 2.70 mt. Height 2.40 mt. Length 5.40 mt.
10	Passage	---	Width 1.00 mt.
11	Doorways Habitable Rooms	Width 2.80 mt. Height 2.00 mt.	Width 0.90 mt. Height 2.20 mt.
12	For Kitchen Bath W.C. etc	Width 0.75 mt. Height 2.00 mt.	Width 0.75 mt. Height 2.00 mt.
13	Staircase	Width 0.75 mt. No restriction for Internal Ladder	Width 0.90 mt.

Source:-NBC 2016

Note:

1. Provided that the minimum clear head way under any beam shall not be less than 2.4 mt.

2. Maximum height permissible for all the component of the building mentioned above is 4 mt.

6.4 Non – Residential buildings

The minimum area for office / room / shop or any other space to be used as workspace shall not be less than 6.0 sq. mt. with a minimum width of 2.1 mt.

6.5 Other general requirement

6.6 Kitchen

Any room to be used as kitchen shall have:

a) Unless separately provided in pantry, means for washing of kitchen utensils, which shall lead directly or through a sink to a grated and trapped – connection to the waste pipe;

b) An impermeable floor;

c) At least a window not less than 1 sq mt. in area open directly to an interior or exterior open space, but not into a shaft and ;

d) In residential building 15 mt. or more in height, refuse chutes.

6.7 Bathroom and W.C.

Every bathroom or water closet shall:

a) Be so situated that at least one of its walls open to external air and shall have a minimum opening in the form of window or ventilation to the extent of 0.37 sq. mt.

b) Not to be directly over any room other than another latrine, washing place, bath or terrace unless it has a watertight floor.

c) Have the platform or seat made of water tight non-absorbent material.

d) Be enclosed by walls or partitions and the surface of every such wall partition shall be finished with a smooth impervious material to a height of not less than 1.0mt above the floor of such a room.

e) Be provided with an impervious floor covering, sloping towards the drain with a suitable grade and not towards verandah or any other room.

f) No room containing water closets shall be used for any purpose except as a lavatory.

g) Every water closed and / or a set of urinals shall have flushing cistern of adequate capacity attached to it.

h) A toilet on terrace having a maximum of 2.2 mt height shall be permitted subject to condition that the area of toilet be counted in FAR.

i) All the sewerage outlets shall be connected to the Municipal Sewerage system. Where no such system exists, a septic tank shall be provided within the plot conforming to the requirements.

6.8 Mezzanine floor

6.8.1 Height

It shall have a minimum height of 2.2 m.

6.8.2 Size

The minimum size of the mezzanine floor if it is to be used as a living room shall not be less than 9.5 m2. The aggregate area of such mezzanine floor in a building shall in no case exceed one-third the plinth area of the building.

6.8.3 Other Requirements

A mezzanine floor may be permitted over a room or a compartment, provided,

a) it conform to the standard of living rooms as regards lighting and ventilation in case the size of mezzanine floor is 9.5 m2 or more.
b) It is so constructed as not to interfere under any circumstances with the ventilation of the space over and under it;
c) Such mezzanine floor is not subdivided into smaller compartments;
d) Such mezzanine floor or any part of it shall not be used as a kitchen; and

e) In no case shall a mezzanine floor be closed so as to make it liable to be converted into unventilated compartments.

6.9 Corner site

When the site fronts on two streets, the frontage would be as on the street having larger width. In cases, where the two streets are of same width, then the larger depth of the site will decide the frontage and open spaces. In such case the location of a garages (on a corner plot) if provided within the open spaces shall be located diagonally opposite the point of intersection.

6.10 Damp site

Wherever the dampness of a site or the nature of the soil renders such precautions necessary, the ground surface of the site between the walls of any building erected thereon shall be rendered damp proof to the satisfaction of the authority.

6.11 Distance from electric line

An overhead line shall not cross an existing building as far as possible and no building shall be constructed under an existing overhead line. No accessible point from any Verandah, balcony, or the like shall be allowed to be erected or re-erected or any additions or alterations made to a building not having the following minimum clearances from an overhead electric supply line, in accordance with the current Central Electricity Authority.(**Measures Relating to Safety and Electric Supply)Regulations. 2010** as amended from time to time:

a) Clearance of buildings from lines of voltages and service lines not exceeding 650V

1) An overhead line shall nut cross over an existing building as far as possible and no building shall be constructed under an existing Overhead line.

2) Where an overhead line of voltage not exceeding 650 V passes above or adjacent to or terminates on any building, the following minimum clearances from any accessible point, on the basis of maximum sag, shall be observed:

i) For any Flat Roof, Open Balcony, Verandah roof and Lean-to-roof:

a) Where the line passes above the building, a vertical clearance of 2.5 m from the highest point, and

b) When the line passes adjacent to the building, a horizontal clearance of 1.2 m from the nearest point, and

ii) For pitched roof:

a) Where the line passes above the building, a vertical clearance of 2.5 m immediately under the line, and

b) When the line passes adjacent to the building, a horizontal clearance of 1.2 m.

3) The horizontal clearance shall be measured when the line is at a maximum deflection from the vertical due to wind pressure.

4) Any conductor so situated as to have a clearance less than that specified above shall be adequately insulated and shall be attached at suitable intervals to a bare earthed bearer wire having a breaking strength of not less than 350 kg.

b) Clearances front buildings of lines of voltages exceeding 650 V.

1) An overhead line shall not cross over an existing building as far as possible and no building shall be constructed under an existing overhead line.

2) Where an overhead line of voltage exceeding 650 V passes above or adjacent to any building or part of a building, it shall have on the basis of maximum sag a vertical clearance above the highest part of the building immediately under such line, of not less than:

i) For lines of voltages exceeding 650 V — 3.7 m upto and including 33 kV; and

ii) For lines of voltages exceeding 33 kV — 3.7 m plus 0.30 m for every additional 33 kV or part thereof.

3) The horizontal clearance between the nearest conductor and any part of such building shall, on the basis of maximum deflection due to wind pressure, be not less than:

i) For lines of Voltages exceeding 650 V and up to and including 11 kV : 1.2 m

ii) For lines of voltages exceeding 11 kV and up to and including 33 kV : 2.0 m

iii) For lines of voltages exceeding 33 kV : 2.0m plus 0.3 m for every additional 33 kV or part thereof

4) For high voltage direct current (FTVDC) systems, vertical clearance and horizontal clearance, on the basis of maximum deflection due to wind pressure, from building shall be maintained as below:

Table 6.2: -

S. No.	D.C Voltage	Vertical Clearance	Horizontal Clearance
1	100	4.6	2.9
2	200	5.8	4.1
3	300	7	5.3
4	400	7	6.2
5	500	9.1	7.4
6	600	10.3	8.6
7	800	12.4	10.7

Source:- NBC 2016

6.12 Ledge or Tand / Loft

6.12.1 Height

The minimum head-room of ledge or Tand / Loft shall be 2.2 m. The maximum height of loft shall be 1.5 m.

6.12.2 Size

A ledge or TAND / Loft in a habitable room shall not cover more than 25 percent of the area of the floor on which it is constructed and shall not interfere with the ventilation of the room under any circumstances.

6.13 Garage

6.13.1 Height

The height of a garage shall be not less than 2.4 m.

6.13.2 Size

The size of garages shall be as below:

a) Private garage - 3.0 m x 6.0 m. minimum;

And

b) Public garage - Based on the number of vehicles parked, etc.

6.14 Chimneys

The chimneys shall be built at least 0.9 m above flat roofs, provided the top of the chimneys is not below the top of the adjacent parapet wall. In the case of sloping roofs, the chimney top shall not be less than 0.6 m above the ridge of the roof in which the chimney penetrates.

6.15 Parapet

Parapet walls and handrails provided on the edges of roof terraces, balcony, Verandah, etc, shall not be less than 1.0 m and not more than 1.2 m in height from the finished floor level.

6.16 Cabin

The size of cabins shall not be less than 3.0 m2 with a minimum width of 1.0 m. The clear passages within the divided space of any floor shall not be less than 0. 75 m and the distance from the farthest space in a cabin to any exit shall not be more than 18.5 rn. In case the subdivided cabin does not derive direct lighting and ventilation from any open spaces/ mechanical means. The maximum height of the cabin shall be 2.2 rn.

6.17 Boundary Wall

The requirements of the boundary Wall are given below:

a) Except with the special permission of the Authority. The maximum height of the compound wall shall be 1.5 m above the centre line of the front street. Compound wall up to 2.4 m height may be permitted if the top 0.9 m is of open type construction of a design to be approved by the Authority.

b) In the case of a comer plot, the height of the boundary wall shall be restricted to 0.75 m for a length of 10 m on the front and side of the intersections and the balance height of 0. 75 m, if required in accordance with (a) may be made up of open type construction (through railings) and of design to be approved by the Authority.

c) However, the provisions of (a) and (b) are not applicable to boundary walls of jails. In industrial buildings, electric substations, transformer stations, institutional buildings like sanitoria, hospitals, industrial buildings like workshops, factories and educational buildings like schools, colleges, including hostels, and other uses of public utility undertakings and strategically sensitive buildings a height upto 2.4 m may be permitted by the Authority.

6.18 Wells

Wells, intended to supply water for human consumption or domestic purposes, where provided.

6.18.1 Location

The well shall be located,

a) Not less than 15 m from any ash pit, refuse pit, earth closet or privy and shall be located on a site upwards from the earth closet or privy;

b) Not less than 18 m from any cesspit soakaway or borehole latrine and shall be located on a site upwards from the earth closet or privy;

c) Such that contamination by the movement of sub-soil or other water is unlikely; and

d) Not under a tree or otherwise it should have a canopy over it, so that leaves and twigs may not fall into the well and rot.

6.18.2 Requirements

The well shall,

a) Have a minimum internal diameter of not less than 1m;

b) be constructed to a height not less than 1 m above the surrounding ground level, to form a parapet or kerb and to prevent surface water from flowing into a well, and shall be surrounded with a paving constructed of impervious material which shall extend for a distance of not less than 1.8 m in every direction from the parapet from the kerb forming the well head and the upper surface of such a paving shall be sloped away from the well;

c) Be of sound and permanent construction (Pucca) throughout. Temporary or exposed (Kutcha) wells shall be permitted only in fields or gardens for purposes of irrigation; and

d) have the interior surface of the lining or walls of the well be rendered impervious for a depth of not less than 1.8m measured from the level of the ground immediately adjoining the well- head.

6.19 Office-Cum-Letter Box Room

In the case of multi-storeyed multifamily dwelling apartments constructed by existing and proposed Cooperative Housing Societies or Apartment Owners Associations, limited companies and proposed societies, an office-cum-letter box room of dimension 3.6 m X 3 m shall be provided on the ground floor. In case the number of flats is more than 20, the maximum size of the office-cum-letter box room shall be 20 m^2

6.20 Meter Rooms

For all buildings above 15 m in height and in special occupancies, like educational assembly, institutional. industrial storage hazardous and mixed occupancies with any of the aforesaid occupancies having area more than 500 m^2 on each floor. provision shall be made for an independent and ventilated meter (service) room, as per requirements of electric (service) supply undertakings on the ground floor with direct access from outside for the purpose of termination of electric supply from the licensee's service and alternative supply cables. The doors provided for the service room shall have fire resistance of not less than two hours.

6.21 Stairway

Stairway shall conform to the following provisions in addition to items (i) to (vii) below. In addition, in order to satisfy firefighting requirements any stairway identified as an exit stairways shall confirm to the requirement in fire protection regulations provided in these regulation.

i). Width: The minimum width of a staircase other than a fire escape shall be as given in Table here under:

Table 6.3: -

S.No.	Type of occupant	Minimum width of staircase/ Stairway / Corridors in meters
(1)	(2)	(3)
1	Residential building	
	(a) Low rise	1.2
	(b) Hotels and High rise	1.5
2	Education building	
	(a) Upto 24 m. High	1.5
	(b) Over 24 m. High	2.0
3	Institutional buildings (i.e. Hospital)	
	(a) Upto 10 beds	1.5
	(b) Over to beds	2.0
4	Assembly buildings	2.0
5	Mercantile, business, Industrial Storage, Hazardous Buildings	
	(a) Low rise	1.5
	(b) High rise	2.0

Flight: No flight shall contain more than 12 rises but in residential buildings in narrow plots and in high density Housing a single flight staircase may be permitted.

Risers: The maximum height of a riser shall be 19cm. in residential buildings and 16cm. in any other occupancy. However, in an internal stairway within a dwelling area, a riser may be 25cm. high.

Treads: The minimum width of the tread without nosing shall be 25cm. for staircase of a residential building, other than fire escapes. In other occupancies the minimum width of the tread, shall be 36cm. It shall have a non-slippery finish and shall be maintained in that fashion.
Head room: The minimum head room in passage under the landing of a staircase, shall be 2.2.M.

Floor indicator: The number of each floor shall be conspicuously painted in figures at least 15cm. large on the wall facing the flight of a stairway or at such suitable place is distinctly visible from the flights.

Hand rail: Handrail of a minimum height of 0.9m from the centre of the tread shall be provided.

6.22 Roofs

The roof of a building shall be so designed and constructed as to effectively drain water by means of sufficient rain water pipes of adequate size, wherever required, so arranged, jointed and fixed as to ensure that the rain water is carried away from the building without causing dampness in any part of the walls, roof or foundations of the building or an adjacent building.
The Authority may require rain water pipes to be connected to a drain or sewer to a covered channel formed beneath the public footpath to connect the rain-water pipe to the road gutter or in any other approved manner.

Rain-water pipes shall be affixed to the outside of the external walls of the building or in recesses or chases cut or formed in such external walls or in such other manner as may be approved by the Authority.

It is desirable to conserve rain water using suitable rain water harvesting techniques including by roof water collection. In this context, reference shall be made to Part 9 'Plumbing Services (including Solid Waste Management), Section 2 Drainage and Sanitation' of the Code.

6.23 Ramps

1. Ramps for pedestrians:

(a) General: The provisions applicable to stairway shall generally apply to ramps. A ramp in a hospital shall not be less than 2.25 mts wide in addition to satisfy the firefighting requirements.

(b) Slope: A ramp shall have slope of (not more than 1:10). It shall be of non-slippery material.

(c) Handrail: A handrail shall be provided on both the sides of the ramp.

2. Ramps for handicapped people: The provision of the ramp with handrails for every public building of ground floor only is compulsory for handicapped people as per the revised **National Building Code**.

3. Ramp for basement or storied parking: For parking spaces in a basement and upper at least two ramps of adequate width and slope shall be provided preferably at the opposite and such ramps may be permitted in the side and rear marginal open spaces after leaving sufficient space for movement of firefighting equipment's.

6.24 Stairs, Lifts, Lobbies and corridor

The width of lobbies or corridors in building shall be as under:

(a) (I) In case of residential and non-residential building except individual detached building minimum clear width of corridor shall be as under:

Table 6.4: -

Length of Corridor in Mts	Width of Corridor in Mts	
	Residential	Non-Residential
Upto 6	1.0	1.2
Upto 9	1.2	1.5
Upto 15	1.2	2.0
Above 15	1.5	2.5

Notes:

i). For every additional 9.00mts length or part there of the width of corridor shall be increased by 0.30mts upto a maximum of 3.00mts.

ii). In case of starred hotels the width of the corridor shall be as per the authorized standards of the starred hotels.

(a) *Whereas in case of residential dwelling unit occupied by single family and constructed up to three floors width of the stairs shall not be less than 1.0mtr.*

(b) In case of all non-residential and high rise residential building, the clear width of stair landing exclusive of parapet shall not be less than 1.5mts.

(c) Minimum stair width for more than 6 tenements on each floor shall be 1.5mts.

(d) The stair-case and lifts (elevators) shall be so located that it shall be within accessible distance of not more than 25mts. from any entrance of tenement or an office provided on each floor.

CHAPTER – 7

SPECIAL REQUIREMENTS FOR OCCUPANCY, LAND DEVELOPMENT, OTHER INDUSTRIAL BUILDING (FACTORIES, WORKSHOPS, ETC.) AND BUFFERS ETC.

The relevant provisions contained in the Factory Act. 1948 shall apply for construction of factory buildings. The minimum height of workrooms shall not be less than 4.5 mt. measured from the floor level to the lowest point in the ceiling provided that this by- laws shall not apply to rooms occupied by workers for purposes of manufacture.

In case of small factories, employing less than 50 workers for purposes of manufacturing and carrying on a class of manufacturing covered under the flatted factories and service industries, as driven in the Master Plan development Plan, the Authority may allow minimum height upto 3.66 mt

Parking space provisions as provided in development code of Master Plan / Development Plan.

The effluent from industries (industrial and biological in nature) shall be treated and shall be of quality to satisfaction of the concerned local bodies before letting out the same into a watercourse or municipal drain.

7.1 Educational building (School / Colleges)

All educational buildings shall be dealt as per University Grant Commission norms and provision of **National Building code 2016** and the **Jammu and Kashmir School Education Rules, 2010 (SRO 123, dated 18.03.2010**, Education Department) or the latest version of these rules.

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7.2 Assembly building (Cinema, Theatres, etc.)

The relevant provisions of the Cinematographic Act and Rules of the State and IS: 4878 code for construction of cinema Building shall apply for planning, design and construction of cinema Building.

7.3 Pollution control

All building shall conform to provisions of Environment Act and Rules.

7.3.1 Air pollution

All building shall conform to provisions of Air Pollution control Act, 1981.

7.3.2 Water pollution

All building shall conform to provisions of Water (Prevention and Control of pollution) Act, 1974.

7.3.3 Noise pollution

All buildings shall maintain ambient air quality standards in respect of noise, as prescribed in the Noise pollution (Regulation and control) Rules 2000.

7.4 Medical facilities

All medical facilities shall be dealt as per the norms fixed by the Government of Jammu & Kashmir Department of Health, F.W. & Medical Education.

7.5 Defence

Construction of any type of Govt. and private buildings near defence land/premises shall be governed as per guidelines of Govt. of India, Ministry of Defence.

7.6 Railway

Construction of any type of Govt. and private buildings near railway land shall be governed as per guidelines of Govt. of India, Ministry of Railways (Railway Board).

7.7 Distance from water course

a) The building activity in the areas vulnerable to floods/flash floods shall be regulated under the provision of Irrigation and Flood control department or the flood zonation maps notified by the department from time to time.

b) No development, whether by filling or otherwise, shall be carried out within 50 meters from the edge of the bank of river Chenab, Tawi, Ravi and Ujh or any other river//khad so specified by a separate order by the competent authority. In case of Ranbir canal and other canals no development shall be allowed within 20 meters from the edge of canal or as per the building regulations whichever is more. For Mansar, Surinsar and other lakes, no development shall be allowed within 30 meters from the edge of lake or as per the building regulations whichever is more.

c) In case of talab, village tanks, lake, water bodies etc., the distance from the water body shall be as may be prescribed under any other general or specific orders of the competent authority.

d) These restricted development zones and other water courses, which pass through a land shall be developed and maintained according to the discharge of water.

e) Provided that where a water course passes through a low lying land without any well-defined bank, the applicant may be permitted by the competent authority to restrict or direct the water courses to an alignment and cross section determined by the competent authority.

7.8 Heritage

Development/Construction/Mining around all ASI protected monuments shall be governed by National Monuments and Archaeological sites and remains Act/Rules (GOI), Jammu and Kashmir Ancient Monuments Preservation (Amendment) Act, 2010 and Jammu and Kashmir Heritage (Conservation and Preservation) Act, 2010.

7.9 Forest

All building shall conform to provisions of J&K Forest, Wildlife and Bio-Diversity Act and Rules.

7.10 Sports Infrastructure

All Provisions related to sports Infrastructure shall be dealt as per the Guidelines/Specifications of Sports Authority of India (SAI), URDPFI Guidelines 2014 and NBC 2016 or its latest version.

Chapter – 8

ELECTRIC VEHICLE CHARGING INFRASTRUCTURE (EVCI):

8.1 Electric vehicle charging infrastructure (EVCI)

Based on the occupancy pattern and the total parking provisions in the premises of the various building types, charging infrastructures shall be provided only for EVs, which is currently assumed to be 20% of all 'vehicle holding capacity'/'parking capacity' at the premise. Additionally, the building premise will have to have an additional power load, equivalent to the power required for all charging points in a Public Charging Station(PCS) to be operated simultaneously, with a safety factor of 1.25

8.1.1 Residential Buildings (plotted house)

Table 8.1:- Charging Infrastructure requirements for individual house/self-use

Building Type	**Plotted House**
Ownership of Station	Private (Owner)
Connection and Metering	Domestic meter
Type of Charger	Slow chargers as per owner's specific requirements
Modes of Charging	AC (Single charging gun)
Norms of Provisions	Min. 1 SC and additional provisions as per the owner individual.

Note: *The charging infrastructure installed by a home owner shall be construed as a Private CI meant for self-use (non-commercial basis)*

8.1.2 All other buildings (including Group Housing)

Any PCS installed at Public, Private areas or building premises of any category that caters to commercial mode of charging of EVs shall be deemed as a Public Charging Station and shall have to install the minimum requirements of chargers as specified in the Guidelines dated 14.12.2018 of Ministry of Power. However, in order to provide sufficient charging points for the EV share in all vehicles, ratio of types of chargers is recommended in the table below

Table 8.2:- Charging Infrastructure requirements for PCS (Commercial use)

Building Type	**Any Building Type**
Ownership of Station	Service Provider
Connection and Metering	Commercial Metering and Payment

Type of Charger	As per min. requirements specified in MoP Guidelines			
Additional Chargers	PCS service providers shall install additional number of kiosk/chargers beyond the minimum specified requirements to meet the ratio of charging points as prescribed below (by the type of vehicles).			
Norms of Provisions for charging points	4Ws 1 SC- each 3 EVs 1 FC- each 10 EVs	3Ws 1 SC- each 2 EVs	2Ws 1 SC- each 2 EVs	PV (Buses) 1 FC- each 10 EVs

Notes:

- *Charging bays shall be planned currently at 20% capacity of all vehicles including 2Ws and PVs (cars)*
- *Open metering and on-spot payment options to be available for all users.*
- *Provision of FCB CS and BS shall not be mandatory, and will be at the discretion of the service provider.*

8.1.3. Rationale for EVCI establishment

Rapid urbanization coupled with adoption of mechanized transportation modes has resulted in high emissions of Green House Gases that goes on to impact Global warming. Unless, the global surface temperature rise is restricted to no more than 2oC compared with pre-industrial levels, the IPCC has warned that the world will see irreversible catastrophic climate change.

India being a signatory to the UNFCCC, has pledged for efforts to assess the Greenhouse Gas Emissions (GHG) of anthropogenic origin and removal by sinks. India's per capita emissions are still considered low at 1.9 tonnes (2013), but its total emissions are next only to China and the US and is likely to overtake those of the EU by 2019.

While comparing the Indian cities for their emission scores, Delhi is on top as the biggest emitter at over 38 38 million tonnes of carbon dioxide equivalent overall emissions, followed by Greater Mumbai at 22.7 million tonnes and Chennai at 22.1 million tonnes, Kolkata at 14.8million tonnes, Bangalore at 19.8million tonnes, Hyderabad at 13.7 million tonnes and Ahmedabad at 9million tonnes were the other cities whose emissions for the year were calculated sector wise.

As per the statistics of Transport Department (GNCTD), total number of vehicles in Delhi is more than the combined total vehicles in Mumbai, Chennai and Kolkata. Delhi has 85 private cars per 1000 population against the national average of 8 cars per 1000 population. In terms of C02 emissions due to motor vehicles, Delhi emits about 12.4 million tonnes while the city of Bengaluru emits about 8.6 million tonnes.

Therefore, addressing the quantum of emissions from the "Transport" and "Domestic" sector emerges to be the high priority subjects under the overarching umbrella of "Climate change mitigation" as committed to the UNFCC.

Encouraging "Electric Vehicles" as a viable option for phased transportation in terms of short and long distance trips with appropriate "Charging Infrastructure" is therefore, the pre-condition for this paradigm shift I phased migration to sustainable transportation.

For this changes are required in Infrastructure provisions (at Regional and City levels) and in Development Control Regulations (in terms of provisions therein) to include the formulations of norms and standards for "Charging Infrastructure" in the said Mater Plan Regulations and State Building Regulations for adoption across the country suiting local conditions.

8.2 EV Charging Technology

8.2.1 Electric Vehicle Supply Equipment (EVSE):

An EVSE is a wall mounted box that supplies electric energy for recharging of electric vehicle batteries. Also EVSEs have a safety lock-out feature that does not allow current to flow from the device until the plug is physically inserted into the car.

EVSEs can be customized with added features like:

- Authentication
- Integrated payment gateways
- Software for remote monitoring.

As electric vehicle charging technology continues to advance, several standards and guidelines have become widely accepted across the industry. This section gives a brief overview of charging infrastructure technology, standards, and terminology.

8.2.2 Different types of EVSE:

Charging speeds· Charging power, which determines the time required to charge a vehicle, can vary by orders of magnitude across charge points, as shown in Table 8.3. A small household outlet may charge as slowly as 1.2 kW, while the most advanced rapid charging stations can charge at up to 350 kW. Charging infrastructure is broadly broken into three categories based on speed: Level 1, Level 2, and direct current (DC) fast charging (sometimes referred to as Level 3).

(*Source: "Emerging Best Practices for Electric Vehicle Charging Infrastructure", Oct' 2017*)

Private Charging

Charging batteries of privately owned cars through domestic charging points. Billing is mostly part of home domestic metering.

AC "Slow" Charging:

The home private chargers are generally used with 230Vl15A single phase plug which can deliver a maximum of up to about 2.5KW of power. The EVSE supplies AC current to the vehicle's on-board charger which in turn converts the AC power to DC allowing the battery to be charged.

Public Charging

For charging outside the home premises, electric power needs to be billed and payment needs to be collected. The power drawn by these chargers may need to be managed from time to time.

DC "Fast" Charging:

DC current is sent to the electric car's battery directly via the charge port. FC chargers (usually 50 KW or more) can supply 100 or more kilometres of range per hour of charging. The fast chargers would generally be used as a top-up, rather than fully charging vehicles. These are important for cab companies and corporate users who have a fleet of electric cars.

8.3 Options for EV Charging

There is an urgent need to offer flexible charging infrastructure for different vehicle segments to drive adoption of EVs. Charging infrastructure is the most crucial enabler in the entire EV value chain. The exploration of different charging models according to the local conditions shall enable faster deployment of electric vehicles in the country.

EV share in all vehicles · It has been broadly projected that by the current rate of adoption of EVs, about 15% of all vehicles in the country would be EVs by the year 2020. Therefore, while assuming percentage composition of all proposed capacities in Public facilities of vehicle holding capacity, the Metropolitan and 'Tier I' cities will be assumed to have a higher percentage share of EVs, say 20% for now. The charging infrastructure prescriptions in all urban development guidelines shall, therefore, be in consonance with the said percentage.

Power Load sanction to premises - While adding these Charging Infrastructures to the proposed set of building types of the Indian cities, enhanced Power Load shall have to be had for each such building type by the Power DISCOMs, commensurate to the total additional power requirement of simultaneous operation of all the prescribed charging points in the premise. With further advancement of charging technologies and the enhanced capacity of

chargers to draw more power, it is advised that the load capacity assigned to each premise should be kept with a safety factor of 1.25 with a long-term vision of 30 years.

Table 8.3:- EVs charging "modes" and 'availability'

Vehicle type	Slow Charging	Fast Charging	Public CI
2 Wheelers	**Y**	**N**	**Yes/Limited**
3 Wheelers	**Y**	**N**	**Yes/Limited**
PVs (Cars)	**Y**	**Y**	**Yes**
PVs (Buses)	**N**	**Y**	**Yes**

Table 8.4:- Charging options for EV types (by ownership)

Vehicle type	Private CI	Public CS	Predominant place of charging
2 Wheelers	SC/BS	SC	Point of residence/work
3 Wheelers	SC/BS	SC/BS	Residence/Parking stations
PVs (Cars)	SC/BS	FC	Residence/Point of work/other public places
PVs (Buses)	_	FC/BS	Bus Terminals/Depots

Note:

- *The option of Battery Swapping (BS) for privately owned 2Ws and PV (Cars) is limited to Private CI.*
- *For 3 Was the BS is proposed to be made available in PCS, for faster recharge experience only*
- *For PV (Buses), Captive Fast charging infrastructure for 100% internal use for fleets maybe adopted by privately owned Depots/Garages.*

Based on the above stated EV charging technologies available and the current trend of evolving technologies of faster charging experience, the Ministry of Power has issued Guidelines and Standards for setting up Charging Infrastructure for Electric Vehicles [Ministry of Power (MoP) Guidelines dated 14.12.2018] for charging infrastructure to be installed at every Public Charging Station (PCS).'Connectivity regulations and Safety norms' shall be defined by

respective authorities such as Central Electric Authority / MoP for grid access to such PCS / any other charging station infrastructure.

8.4. Charger Specifications and PCS Infrastructure

Any installed PCS shall have one or more electric kiosk boards with installation of all charger models as prescribed in the Guidelines and Standards notified by Ministry of Power, dated 14 December 2018 for "Charging Infrastructure for EVs", with other necessary arrangements as deemed necessary.

Public Charging Station service providers shall be free to create charging hubs and to install additional number of kiosk chargers in addition to the minimum chargers prescribed vide the MoP Guidelines, including options for installation of additional chargers, if required.

Notes:

1. *Minimum infrastructure requirements do not apply to Private Charging Points meant for self-use of individual EV owners (non-commercial basis).*
2. *Captive charging infrastructure for 100% internal use for a company's own fleet will not be required to install all type of chargers and to have NSP tie ups.*

8.5 Location of PCS / FCB CS in local area / building precincts

In accordance with the Guidelines issued by the Ministry of Power (MoP), following minimum standards with regard to density of I distance between PCS in local level facilities in building premise l urban precincts shall be followed as per provisions in the **Model BBL-2016**

1. At the Local levels (within the urban area):

- At least 1Public Charging Station is to be available within a grid of 3Km x 3Km.

2. At the Building premise levels (for various building types)

- Private charging infrastructure (non-commercial use) for individuals.
- For all commercial modes of charging EVs, at least 1PCS, as per minimum specifications laid under MoP guidelines.
- Standalone Battery Swapping Stations may be added with the PCs.

8.5.1. Along Highways and intercity corridors:

- At every 25 Kms on both sides of highways roads, at least 1PCS is to be set up.
- At every 100 Kms on both sides of highways / roads, at least 1 Fast Charging/ FCB Charging Station as per specifications. (May be coupled with PCS)
- Standalone Battery Swapping Stations may be added with the PCS.

8.5.2. In Regional level Industrial SEZs I other Industrial Parks/Estates

- Land for at least 1PCS is to be reserved within a grid of 10 Km x 10 Km of the designated industrial area / park / estates.

8.6 Guidelines and Standards for Charging Infrastructure of Electric Vehicles.

1. Private charging at residences / offices shall be permitted. DISCOMs may facilitate the same.

2. Setting up of Public Charging Stations (PCS) shall be a de-licensed activity and any individual/entity is free to set up public charging stations, provided that, such stations meet the technical as well as performance standards and protocols laid down below as well as any further norms/standards/specifications laid down by Ministry of Power and Central Electricity Authority from time to time.

2.1 Any person seeking to set up a Public Charging Station may apply for connectivity and he shall be provided connectivity on priority by the Distribution Company licensee to supply power in the area.

2.2 Any Charging Station/ Chain of Charging Stations may also obtain electricity from any generation company through open access.

8.7 Public Charging Infrastructure (PCI) - Minimum Requirements:

8.7.1 Every Public Charging Station (PCS) shall have the following minimum infrastructure:

i. An exclusive transformer with all related substation equipment including safety appliance.

ii. 33/11 KV line/cables with associated equipment including as needed for line termination/metering etc.

iii. Appropriate civil works.

iv. Adequate space for Charging and entry/exit of vehicles.

v. Current international standards that are prevalent and used by most vehicle manufacturers internationally are CCS and CHadeMO. Hence, Public

Charging Stations shall have, one or more electric kiosk/boards with installation of all the charger models as follows:

Table 8.5:-

Charger Type	Charger Connectors	Rated Voltage (V)	No. of Charging point/No. of Connector guns
Fast	CCS (min 50 KW)	200-1000	1/1 CG
	CHAdeMO (min 50 KW)	200-1000	1/1 CG
	ype-2 AC (min 22 KW)	380-480	1/1 CG
Slow/Moderate	Bharat DC-001 (15 KW)	72-200	1/1 CG
	Bharat DC-001 (11 KW)	230	3/3 CG of 3.3 KW each
**In addition, any other fast/slow/moderate charger as per approved BIS standards whenever notified.*			

vi. The kiosk/board may have options for installation of additional chargers 1f Required.

vii. The Public Charging Station Providers are free to create Charging Hubs and to Install additional number of Kiosk/Chargers in addition to the minimum number of chargers prescribed above.

viii. Tie up with at least one online Network Service Providers (NSPs) to enable advance remote/online booking of charging slots by EV owners. Such online information to EV owners should also include information regarding location, types and numbers of chargers installed/available etc.

ix. Share charging station data with appropriate DISCOM and to maintain appropriate protocols as prescribed by such DISCOM for this purpose. CEA shall have access to this database.

x. Appropriate public amenities.

xi. Where, in addition to the above, fast charging facility is also planned to be provided at the PCS by the PCI provider, the following additional infrastructure must be provided:

a. Appropriate Liquid Cooled cables if High Speed Charging Facility for on board charging of Fluid Cooled Batteries (FCBs) is also planned.

b. Appropriate Climate Control Equipment for Fast Charging of Batteries to be used for swapping (i.e. Not on-board)

8.7.2 Every Public Charging Station (PCS) shall be operational only after inspection and clearance as communicated by a suitable clearance certificate, by the concerned electrical inspectors/technical personnel designated specifically by the respective DISCOM for this purpose. DISCOMs may also empanel one or more third party authorized technical agencies for this purpose.

8.7.3 Electric Vehicle Service Equipment (EVSE) shall be type tested by an appropriate reputed authority.

8.7.4 The above minimum infrastructure requirements do not apply to Private Charging Points meant for self-use of individual EV owners (non-commercial basis).

8.7.5 Captive charging infrastructure for 100% internal use for a company's own/leased fleet for its own use will not be required to install all type of chargers and to have NSP tie ups.

8.7.6 Public Charging Station can also have the option to add Standalone battery swapping facilities in addition to the above mandatory facilities, provided space/other conditions permit.

8.8 Public charging Infrastructure (PCI) for long distance EVs and/or heavy duty EVs:

8.8.1 Public charging stations for long distance EVs and/or heavy duty EVs (like trucks, Busses etc.) Shall have the following minimum requirements:

i. At least two chargers of minimum 100 kW (with 200-1000 V) each of different specification (CCS & CHadeMO) and with single connector gun each in addition to the minimum charging infrastructure requirements as mandated for Public Charging Stations.

ii. Appropriate Liquid Cooled Cables for high speed charging facility for on-board charging of Fluid Cooled Batteries (currently available in some long range EVs).

iii. In addition to 8.8.1 (i) and (ii) above, the Fast Charging Stations (FCS) for Long Distance EVs and/or Heavy Duty EVs may also have the option of swapping facilities for batteries for meeting the charging requirements as per para 8.7 and para 8.8(i) &

(ii) above. It is notable that Fluid Cooled Batteries (FCBs) are generally necessary for Fast Charging/Long Distance use of EVs and/or for Heavy Duty Vehicles like buses/trucks etc. FCBs will have higher charging rate and longer life.

8.8.2 Such Fast Charging Stations (FCS)which are meant only for 100% in house/captive utilization, for example buses of a company, would be free to decide the charging specifications as per requirement for its in- house company EVs.

8.9 Location of Public Charging Stations:

8.9.1 In case of Public Charging Stations, the following minimum requirements are laid down with regard to density/distance between two charging points:

I. At least one Charging Station should be available in a grid of 3 Km X 3 Km. Further, one Charging Station be set up at every 25 Km on both sides of highways/roads.

II. For long range EVs (like long range SUVs) and heavy duty EVs like buses/trucks etc., there should be at least one Fast Charging Station with Charging Infrastructure Specifications as per para 8.8.I at every 100 Kms, one on each side of the highways/road located preferably within/alongside the stations. Within cities, such charging facilities for heavy duty EVs shall be located within Transport Nagars, bus depots. Moreover, swapping facilities are also not mandatory within cities for Buses/trucks.

8.9.2 Additional public charging stations shall be set up in any area only after meeting the above requirements.

8.9.3 The above density/distance requirements shall be used by the concerned state/UT Governments/their Agencies for the twin purposes of arrangement of land in any manner for public charging stations as well as for priority in installation of distribution network including transformers/feeders etc. This shall be done in all cases including where no central/state subsidy is provided.

8.9.4 The appropriate Governments (Central/State/UTs) may also give priority to existing retail outlets (ROs) of Oil Marketing Companies (OMCs) for installation of Public EV Charging Stations (in compliance with safety norms including 'firewalls' etc.) to meet the requirements as laid above. Further, within such ROs, Company Owned and Company Operated (COCO) ROs may be given higher preference.

8.9.5 Any deviation from above norms shall be admissible only after specific approval of State Nodal Agency in consultation with the Central Nodal Agency.

8.10 Database of Public EV Charging Stations:

Central Electricity Authority (CEA) shall create and maintain a national online database of all the Public Charging Stations through DISCOMs. Appropriate protocols shall be notified by DISCOMs for this purpose which shall be mandatorily complied by the PCS/BCS. This database shall have restricted access as finalized between CEA and Ministry of Power.

8.11 Tariff for supply of electricity to EV Public Charging Stations:

8.11.1 The tariff for supply of electricity to EV Public Charging Station shall be determined by the appropriate commission, provided however that the tariff shall not be more than the average cost of supply plus 15 (fifteen) percent.

8.11.2 The tariff applicable for domestic consumption shall be applicable for domestic charging.

8.12 Service charges at PCS/BCS:

8.12.1 Charging of EVs is a service as already clarified by Ministry of Power vide letter No. 23/08/2018-R&R dated 13.04.2018.

8.12.2 The State Nodal Agency shall fix the ceiling of the Service Charges to be charged by the Public Charging Stations.

8.13 Priority for Rollout of EV Public Charging Infrastructure:

After extensive consultations with State Governments and different Department/ Agencies of Central Government, phasing as follows are laid down as national priority for rollout of EV Public Charging Infrastructure:

8.13.1 Phase I (1-3Years):

All Mega Cities with population of 4 million plus as per census 2011, all existing expressways connected to these Mega Cities & important Highways connected with each of these Mega Cities shall be taken up for coverage.

8.13.2 Phase II (3-5 Years):

Big cities like State Capitals, UT headquarters shall be covered for distributed and demonstrative effect. Further, important highways connected with each of these Mega Cities shall be taken up for coverage.

8.13.3 The above priorities for phasing of rollout shall be kept in mind by all concerned, including, different agencies of Central/State Governments while framing of further

policies/guidelines for Public Charging Infrastructure of EV s, including for declaring further incentives/subsidies for such infrastructure and for such other purposes.

8.14 Implementation Mechanism for Rollout:

8.14.1 Ministry of Power shall designate a Central Nodal Agency for the rollout. All relevant agencies including Central electricity Authority (CEA) shall provide necessary support to this nodal agency.

8.14.2 Every State Government shall nominate a Nodal Agency for that State for setting up charging infrastructure. The State DISCOM shall generally be the Nodal Agency for such purposes. However, State Government shall be free to select a Central/State Public Sector Undertaking (PSU) including Urban Local Bodies (ULBs), Urban/Area Development Authorities etc. As its Nodal Agency.

8.15 Selection of Implementation Agency for Rollout:

8.15.1 The Central Nodal Agency shall finalize the cities and expressways/highways to be finally taken up from the above phasing, in consultation with the respective State Governments.

8.15.2 An Implementation Agency shall be selected by the respective State Nodal Agency and shall be entrusted with responsibility of installation, operation and maintenance of PCS/FCS/BCS/BSF for designated period as per parameters laid down in this document and as entrusted by the concerned Nodal Agency. The Implementation Agency can be an Aggregator as mutually decided between Central and State Nodal Agencies. However, they can also decide to choose different PCS/FCS providers for bundled packages or for individual locations as mutually decided. Further, whenever bundled packages are carved for bidding, such packages shall necessarily include at least one identified expressway/highway or part cohesive regional package; the selected identified cities may be divided into one or more parts as necessary for such purposes.

8.15.3 Where Implementing Agency is selected by bidding, all bidding shall be conducted by the State Nodal Agency.

8.15.4 There shall be an upper cap on the Service Charges declared by the State Nodal Agency as per para 8.12.2 above. Subsidy, if admissible from Central/State governments, shall be suitably factored in such calculations of Upper Cap/Bid Variable.

(Source: Model Building Bye-Laws 2016, Town and Country Planning Organisation, Ministry of Urban Development.)

CHAPTER – 9

RAINWATER HARVESTING

This chapter gives the mandatory requirements of water conservation. The methods and techniques shall be adopted from NBC.

9.1 The RWH system

The harvesting of rainwater simply involves the collection of water from surfaces on which rain falls, and subsequently storing this water for use. The rainwater collected can be stored for direct use or can be recharged into the underground aquifers. In scientific terms water harvesting (broadly) refers to collection and storage of rainwater from the rooftops. This also restricts evaporation and seepage into building foundations. All buildings having a plot size of 100 sq.m. Or more, while submitting the building plans for sanction, shall mandatorily include the complete proposal of rainwater harvesting.

A rainwater harvesting system consists of:
I. Roof catchment
ii. Gutters
iii. Down pipes
iv. Rain water/ Storm water drains
v. Filter Chamber
vi. Storage Tanks/ Pits/ Sumps.
vii. Ground Water recharge structures like pit, trench, tube well or combination of above structure.

Rainwater Harvesting is a way to capture the rain runoff, store that water above ground or charge the underground aquifers and use it later. This happens naturally in open rural areas. But in congested, over-paved metropolitan cities, there is a need to devise methods to capture the rain water. The rainwater that is incident on the surface/ rooftop is guided to bore wells or pits or new/old/ abandoned wells through small diameter pipes to recharge the underground water which can be used later whenever required.

Rainwater can be harvested to the extent of 55,000 litres per 100sq. meters area per Year from rooftops.

9.2 Rainwater harvesting techniques:

There are two main techniques of rain water harvestings.

a. Storage of rainwater on surface for future use.
b. Recharge to ground water.

The technical aspects and options of Rainwater harvesting from which the city authorities can assess and choose to adopt (Refer Annexure II to the Model Building Bye-Laws 2016).

9.3 Harvesting provisions in various Building categories:

All buildings in a city contribute to the rainwater runoff during the monsoon and hence such runoff can be harvested for water reuse/recharge.

The indicative provisions of rainwater harvesting in various buildings types are:

Table 9.1 Provisions for Rainwater harvesting by building types

Category Use	**Area of Plot (sq.m.)**	**Provision to be made**	**Other conditions**
Residential Plotted Houses			
New Proposals	100 and above	Construction of Rain Water Harvesting Structure	Shall have emphasis on both storage and reuse.
Group Housing			
New Proposals	All plot sizes	**a.** Construction of Rain Water Harvesting Structure. i. Concrete paving to be avoided and permeable materials are to be used for all open parking spaces.	Should indicate the system of Strom Water Drainage, Rain Water Harvesting Structure and Recharging Well
Public and Semi-public Buildings			
All Proposals	All Plot Sizes	i. Shall have Rain Water Harvesting Structure and storage ii. Shall have Recharge pits.	Shall have emphasis on both storage and reuse.
Commercial Mixed Use			
All Proposals	All Plot Sizes	i. Construction of Rain Water Harvesting Structure. ii. Soft landscape provision and open spaces with percolation pits. iii. Common treatment plant to be made part of the integrated development, funded by sale of	Should indicate the system of Strom Water Drainage, Rain Water Harvesting Structure and Recharging Well Shall have emphasis on both storage and reuse.

		commercial space.	
Industrial			
All Proposals	All Plot Sizes	i. Construction of Rain Water Harvesting Structure. ii. Soft landscape provision and open spaces with percolation pits. iii. Use of abandoned bore wells for recharging of ground water. iii Common treatment plant to be made part of the integrated development, funded by sale of commercial space.	Should indicate the system of Strom Water Drainage, Rain Water Harvesting Structure and Recharging Well Provision should be made not to inject contaminate water into recharge structures in industrial areas and care is to be taken to keep such structures away from sewer lines, septic tanks, soak pits, landfill and other sources of contamination.
Other Proposals	All Plot Sizes	Similar as above	Similar as above

9.4 Rain Water Harvesting Provisions for Open spaces in cities

The open spaces/recreational land use generally constitute regional parks, district parks, playground and stadium, sports complex, monument zones, public parking, Plaza and other public open space. This may be as high as 30% to 50% of the city's geographic area. All such public open spaces above the size of 500 sq.m. Shall have arrangements for complete utilization and capture of storm water with scientific rain water harvesting arrangements.

Following ideas may also be included:

i. Well cum Channel cum Percolation pits.

ii. Use of abandoned bore wells for recharging of ground water

iii. Artificial or natural Storage of storm water runoff from larger sites.

9.5 Ground Water Recharge

Recharging of ground water should be made mandatory not only for residential buildings but for all types of buildings, including Group Housing Societies having a plot area more than 500 sq.m. and above.

The Ground Water Recharge should also be mandatory for open spaces like parks, parking, plazas and playgrounds. The harvesting and recharge structures could be constructed by the Authority with the involvement of community based organizations like Resident Welfare Associations.

9.6 Enforcement and Monitoring

a. The Authority shall constitute a Rainwater Harvesting Cell which will be responsible for enforcement and monitoring of the provisions of Rainwater Harvesting. The cell shall employ qualified persons who are well versed with the interpretation of Building Bye Laws and responsible for enforcement as well as monitoring the functioning of the Rainwater Harvesting System.

b. The Authority shall include inspection of Rainwater Harvesting Structures before issuing Completion Certificates or NOCs for service connections to the property.

c. Set an example in the city by ensuring that Rainwater is harvested in the properties /assets owned by them including public buildings, markets, community enters, parking spaces, roads and parks etc.

d. The Authority shall also establish a mechanism to monitor 100% of RWH provisions in all the buildings above 1000 sq.m. With annual physical verification, while buildings less than 1000 sq.m. Can be monitored on the basis of 10%random survey by competent authority.

e. With regard to open public spaces viz., Parks, playgrounds etc. the implementation of provision rainwater harvesting may be done with the help of Residents Welfare Associations, Community Building Organization and Non-Governmental Organizations.

f. The Authority shall ensure earmarking budgetary provision for the creation and maintenance of rainwater harvesting structures in public spaces owned and maintained by them, like parking spaces, parks, plazas etc.

g. The practice of incentives and penalties to promote rain water harvesting shall be formulated by the local authority based on best practices. Authority shall design its own incentive and penalty systems, considering the water level and scarcity.

(Source: Model Building Bye-Laws 2016, Town and Country Planning Organisation, Ministry of Urban Development.)

***Note:** For Methods of Rainwater Harvesting and others etc refer the NBC-2016 or its latest version.*

CHAPTER – 10

10. GREEN BUILDINGS AND SUSTAINABILITY

PROVISIONS

Modern buildings consume about 25 to 30 % of total energy, and up to 30 % of fresh potable water, and generate approximately 40 % of total waste. Sustainable buildings have demonstrated reduction in energy and water consumption to less than half of the present consumption in conventional buildings, and complete elimination of the construction and operational waste through recycling.

Thus, all buildings on various plot sizes above 100 sq.m. Shall comply with the green norms and conform to the requirements mandatory for sanction as mentioned in this chapter.

These provisions are not specific to any rating system and are not intended to provide a single metric indication of overall building performance. These provisions allows the practitioners to easily exercise their engineering judgment in holistically and objectively applying the underlying principles of sustainability to a development or building facility, considering its functionality and required comfort level.

10.1 Provisions and Applicability

The green building provisions on various plot sizes are indicated in the table below:

Table 10.1 Provisions and applicability for various plot sizes (Residential and Non-Residential)

Plot Category	Applicable Plot area	Provision for Residential	Provision for Non Residential
I	Up to 100	Nil	Nil
II	100 to 500	1(a), 2(a), 2(b), 4(a)	1(a), 2(b), 4(a)
	500 to 1000	1(a), 1(c), 2(b), 3(c) 4(a)	1(a), 1(c), 2(a), 2(b), 3(c) , 4(a)
	1000 to 3000	1(a),1(c),1(d),2(a), 2(b), 3(b), 3(c)	1(a),1(c),1(d),2(a), 2(b), 3(b), 3(c)
III	Above 3000	1(a),1(b),1(c),1(d),2(a), 2(b), 3(a)	1(a),1(b),1(c),1(d),2(a), 2(b), 3(a)

**Note:*
Provisions marked 1(a), 2(b) etc. are as per section 10.2.

The schemes/ projects formulated on the basis of provisions given in Master plan/ Zonal Development Plan will require approval as indicated:
EIA/ ECC (as per MoEF), ***National Building Code 2016*** *or its latest version (latest),* ***ECBC 2007*** *or latest,* ***BEE Star rating/ LEED of IGBC/ GRIHA of TERI Certification}***

EIA- Environmental Impact Assessment Study Report,
ECC- Environmental Clearance Certificate,
MoEF – Ministry of Environment and Forest,
National Building Code 2016 or its latest version – National Building Code,
ECBC – Energy Conservation Building Code,
BEE – Bureau of Energy Efficiency,
LEED – Leadership in Energy and Environment Design,
IGBC –Indian Green Building Council,
GRIHA – Green Rating for Integrated Habitat Assessment,
TERI – The Energy and Resources Institute.

The prevailing provisions of the above shall be applicable. However if there are any modification in the same, the modified provisions shall become automatically applicable.

10.2 Provisions for Sanction

1. Water Conservation and Management
    a) Rain Water Harvesting
    b) Low Water Consumption Plumbing Fixtures
    c) Waste Water Recycle and Reuse
    d) Reduction of Hardscape

2. Solar Energy Utilization
    a) Installation of Solar Photovoltaic Panels
    b) Installation of Solar Assisted Water Heating Systems

3. Energy Efficiency (Concept of passive solar design of buildings)
    a) Low Energy Consumption Lighting Fixtures (Electrical Appliances – BEE Star and Energy Efficient Appliances)
    b) Energy Efficiency in HVAC systems.
    c) Lighting of Common areas by solar energy/ LED devices.

4. Waste Management
    a) Segregation of Waste
    b) Organic Waste Management

In case owners of properties desire to procure green building ratings from one or more rating bodies, they may suitably incorporate any other provisions if required and additional incentive FAR as per Master Plan may be availed.

10.2.1 Provisions for City and Site level greening

In alignment with National Sustainable Habitat Mission, the Authority shall encourage augmentation of green cover in the city/plot, by following:

The Urban Greening Guidelines, 2014 and other provisions as given below -

i. Provision of minimum 1 tree / every 80sqmt of plot area for plot sizes > 100sqmt and planted within the setback of the plot.

ii. Compensatory Plantation for felled/transplanted tress in the ratio 1:3 within the Premises under consideration.

iii. Choice of species for plantation in site and abutting the road to be adopted as per Section 8 of the Urban Green Guidelines, 2014.

iv. The unpaved area shall be more than or equal to 20% of the recreational open Spaces.

10.2.2 Water Re-use and Recycling

All building having a minimum discharge of 10,000 Ltrs. and above per day shall incorporate waste water recycling system. The recycled water should be used for Horticultural purposes.

10.2.3 Roof Top Solar Energy Installations

Roof top photovoltaic power station, or rooftop PV system, is a photovoltaic system that has its electricity-generating solar panels mounted on the rooftop of residential or commercial buildings. The various components of such a system include photovoltaic modules, mounting systems, cables, solar inverters and other electrical accessories. Rooftop PV systems are faster than other types of renewable power plants. They're clean, quiet, and visually unobtrusive. Table 10.2 below stipulates the Norms for Roof Top Solar PV Installation-

Table 10.2 Norms for Roof Top Solar PV Installation and generation

S.No.	Category of buildings/area	Area standards	Generation requirement
	Plotted Housing		
1	**Plotted Housing**	**For HIG Plots and above**	**Minimum 5% of connected load or 20W/sqft for *"available roof space"***, whichever is less.**

2	**Group Housing**	**All proposals, as per Group Housing Norms**	**Minimum 5% of connected load or 20W/sqft for *"available roof space"*, whichever is less.**
	All other buildings (Government or Private, defined as per clause 1.16 b to g) (mandatory for buildings having shadow free rooftop area > 50 sqmt)		
3 **4** **5** **6** **7** **8**	**Educational** **Institutional** **Commercial** **Industrial** **Mercantile** **Recreational**	**Plot size of 500 sqmt and above**	**Minimum 5% of connected load or 20W/sqft for *"available roof space"*, whichever is less.**

* Area provisions on roof top shall be @12 sq.mt per 1KWp, as suggested by Ministry of New and Renewable Energy.

** "available rood area" = 70% of the total roof size, considering 30% area reserved for residents' amenities.

10.2.4 Installation of Solar Assisted Water Heating System in Buildings

I. No new building in the following categories in which there is a system of installation for supplying hot water shall be built unless the system of the installation is also having an auxiliary solar assisted water heating system:-

a) Hospitals and Nursing Home.
b) Hotels, Lodges, Guest Houses, Group Housing with a plot area of 4000 sq m.
c) Hostels of Schools, Colleges and Training Centres with more than 100 Students.
d) Barracks of armed forces, paramilitary forces and police.
e) Individual residential buildings having more than 150 sq m. plinth area.
f) Functional Buildings of Railway Stations and Air Ports like waiting rooms, Retiring rooms, rest rooms, inspection bungalows and catering units.
g) Community Centres, Banquet Halls, Barat Ghars, Mangal Karyalayas and Buildings for similar use.

II. Definitions

i) "Solar Assisted Water Heating System"- A device to heat water using solar energy as heat source.

ii) "Auxiliary back-up" Electricity operated or fuel fired boilers/systems to heat water coming out from solar water heating system to meet continuous requirement of hot water.

iii). "New Building" Such buildings of above said categories for which construction plans have been submitted to the Authority for clearance.

iv). "Existing building" Such buildings, which are licensed to perform their respective business.

III. Installation of Solar Water Heating System

a) *New Buildings*: Clearance of plan for the construction of new buildings of the aforesaid categories shall only be given if they have a provision in the building design itself for an insulated pipeline from the rooftop in the building to various distribution points where hot water is required. The building must have a provision for continuous water supply to the solar water heating system. The building should also have open space on the rooftop, which receives direct sun light. The load bearing capacity of the roof should at least be 50 kg. per sq. m. All new buildings of above said categories must complete installation of solar water heating systems before obtaining necessary license to commence their business.

b) *Existing Buildings*: Installation of Solar Assisted Water Heating Systems in the existing building shall be made mandatory at the time of change of use to above said category provided there is a system or installation for supplying hot water.

IV. *Capacity*: The capacity of solar water heating system to be installed on the building of different categories shall be decided in consultation with the local bodies. The recommended minimum capacity shall not be less than 25 litres per day for each bathroom and kitchen subject to the condition that maximum of50% of the total roof area is provided with the system.

V. *Specifications*: Installation of Solar Assisted Water Heating Systems shall conform to BIS specification IS 12933. The solar collectors used in the system shall have the BIS certification mark.

VI. *Auxiliary System*: Wherever hot water requirement is continuous, auxiliary heating arrangement either with electric elements or oil of adequate capacity can be provided.

10.2.5 Sustainable Waste Management

Zero Waste is a concept of waste management and planning approaches that emphasize waste prevention as opposed to end waste management. This means restructuring production and distribution systems, designing and managing products and processes to systematically follow the 3R rule of Reduce, Re-use and Re-cycle the volume of waste, to conserve and recover all used resources, and therefore eliminating all discharges to landfills, and prevent air, water and land pollution. Zero Waste/ land-fill can be achieved by adopting systematic

approach of segregation at source by planning, by collection facilitation and most importantly by creating public awareness.

The green waste can be converted into fuel cakes, kitchen waste into manure, construction & demolition waste into bricks, plastic waste into oil, paper, and glass and steel back into the same and all residual inert materials can also be converted into bricks. Achieving zero land-fill is more conveniently possible, if

a) The collection is made from house to house and some segregation is done at House hold level and

b) Separate wet and dry bins must be provided at the ground level.

c) The recycling is done at decentralized, say, ward or even lower levels.

10.2.6 Sustainability of Building Materials

Sustainability of natural resources for building materials shall be ensured through Conservation of available natural resources and use of supplementary materials such as Industrial/agricultural by-products, renewable resources, and factory made building components and recycled construction and demolition waste.

Supplementary building materials (derived or processed waste) shall be suitably used In combination with conventional resources offers dual advantages in purview of Health & environmental benefits.

Use of Factory made pre-fab/pre-cast and recycled components with Green benefits:
a) Panels, hollow slabs, hollow blocks – etc. - conservation of materials, less water requirement.
b) Fly Ash bricks, Portland Pozzolana cement, Fly ash concrete, phosphogypsum based walling & roofing panels, particle wood – recycled use of industrial/ agricultural by-products.
c) Fly ash/ AAC (Autoclaved aerated light weight concrete) panels/ CLC (Cellular light weight concrete) panels- ensures thermal comfort (significant reduction in air conditioning requirement)
d) Use of bamboo & rapidly growing plantation timbers- environmental benefits. Local materials are generally suitable for prevailing geo-climatic conditions & have advantage of low transportation cost & time. Sustainable use of building materials shall be encouraged which may combine certain mandatory provisions and incentives.

10.3 Various Guidelines for Green Rating systems

The respective State Governments may prepare their separate Green Rating systems for buildings by selectively combining/adopting/amending the provisions between the following guidelines:

1. IGBC guidelines by the Confederation of Indian Industries.
2. GRIHA guidelines by the Ministry of New and Renewable Energy. GoI.

In pursuance of the ***National Sustainable Habitat Mission*** on Energy Efficiency in Buildings, the Authority shall encourage the provisions of the following Energy efficiency guidelines by certain mandatory provisions and incentives-

3. ECBC guidelines prepared by Bureau of Energy Efficiency, Ministry of Power. GoI
4. Model Energy Efficiency guidelines. (NSMH Sub report by Bureau of Energy Efficiency

(Source: Model Building Bye-Laws 2016, Town and Country Planning Organisation, Ministry of Urban Development.)

CHAPTER - 11

GREY WATER RECYCLING BYELAWS

Whereas it is expedient to regulate the activities such as:

a) Pre-treatment of Grey Water, sewage and grey water before it is accepted for reuse for the purpose of non-portable use;

b) Installation of flow meters, samplers or other devices to measure flow and quality of the sewage, recycled water & industrial waste discharge;

c) Pre-treatment of Grey water and Sewage as per classification before it is accepted for discharge to the sewerage system;

d) Separation of non-portable water plumbing and portable water plumbing;

e) Sampling and monitoring of industrial waste discharges to ensure compliance of conditions under the byelaws;

f) Encouraging the use of treated recycles water for non-portable use;

11.1 Definitions

In this Byelaws:

'Grey Water' means water involving water from sinks, tubs, showers and washing.

'Industrial/Commercial Premises' means any premises which is being used or intended to be used (whether for profit or not) for carrying on any trade, business, education, research or industry.

'Commercial Waste' or 'Wastes' are the waste removed from an industrial plant or other premises by way of discharge of any liquid, with or without matter in suspension or solution therein, that is or may be discharged from trade premises in the course of any trade or industrial process or operation or in the course of an activity or operation of alike nature.

'Inspector' includes whoever the President/ Executive Officer of Municipal Committee Council has appointed in writing for the purposes of these Byelaws.

'ISO5667' means the latest edition complete with any amendments, of international Standards ISO 5667:2003 Water Quality Sampling.

Part 1:1980 Guidance on the design of Sampling programmes.

Part 2:1991 Guidance on sampling techniques.

Part 3:1994 Guidance on the preservation and handling of samples.

Part 10:1992 Guidance on sampling of Grey Water

'ISO TR 9824' means the latest edition complete with any amendments, of international Standard ISO TR 9824: Measurement of liquid flow in open channels;

Part 1:1990 Measurement of free surface flow in closed conduits Methods.

Part 2:1990 Measurement of free surface flow in closed conduits Equipment.

'Sewerage System' means all types of sewer, appurtenances, pumping stations, storage tanks, waste water treatment facility plants, marine outfalls and other related structures existing in the urban area and used for the reception, treatment and disposal of waste water and also termed as "waste water system"

'Waste minimization' means the implementation on trade premises, of operations and restrictions, appropriate to the goal of reducing or eliminating the quantity and toxicity of wastes.

Section 'A' Applicability of Grey Water Reuse Byelaws

11.1.1. Applicable to all group housing, commercial and industrial premises which fall in one of the following categories:

Category 1: Whose plot area is more than 2000 Sq.Mt.

Category 2: Water quota is more than 40,000 litres/day.

Category 3: Premises which has more than 50 dwelling unit of any kind.

11.1.2. Exemptions could be accorded under following circumstances, as decided by the authority;

In case the existing premises cannot permit the provision of additional overhead tank for the purpose of the use of treated water.

If, in the existing structure, there is no space for installation of treatment facility and collection chamber.

11.2 Enforcement of byelaws:

11.2.1. In case of existing properties, President/ Executive Officer of Municipal Committee/ Council or his authorized officer will issue a notice to the occupier for making arrangements of for reuse of Grey Water within specified time.

11.2.2. In case of proposed/intending/under redevelopment properties, the occupier/developer/builder will submit an application directly or through his authorized consultant to the President/ Executive Officer of Municipality Committee/ Council with details of proposed 'Discharge management Plan' along with the application for demand of water permission to connect the Grey Water/Sewerage to municipal sewerage system where ever applicable.

11.3 Granting a Permission

11.3.1 Every premises will be granted permission for the discharge of industrial waste or wastes to the municipal sewerage system only if the recycling measures and conditions set forth in schedules issued under this Byelaw are fulfilled.

11.4 Waste tests and their results

11.4.1 An occupier of an industrial plant or premises requiring a license shall provide to the President/ Executive Officer of Municipal Committee/ Council or an authorized officer once a year for the purpose of receiving a license, test results of the industrial wastes discharged from the plant or premises.

11.4.2 Without derogating the provisions specified in clause of byelaw 4, the occupier of a premises requiring a license or the occupier of a controlled plant or premises, shall provide to President/ Executive Officer of Municipality Committee/ Council test results of the industrial wastes or waste discharged from the plant or premises at any time he is requested in writing to do so by the President/ Executive Officer of Municipality Committee/ Council.

11.4.3 The testing of wastes and the submission of the results shall be done in a manner in accordance with the terms and conditions prescribed by the

President/ Executive Officer of Municipality. Committee/ Council or an authorized officer in this regard.

This Byelaw accords the authority of President/ Executive Officer of Municipality Committee/ Council, his agent or an authorized officer of their authority to visit the plant premises at any reasonable time.

11.5 Notices for testing of discharge

11.5.1. The President/ Executive Officer of Municipality Committee/ Council may order the testing of sample industrial waste or wastes as described in clause of byelaw 4 if he feels that the circumstances so demand and he may, by written notice, direct the plant or premises occupier to pay the expenses of performing such tests.

11.5.2. A controlled plant whose occupier received notice as stated in clause of byelaws (4) shall comply the provisions of byelaws (3) prescribed above for that purpose.

11.6 Operational Permission for the Grey Water Recycling Treatment Plant

11.6.1. President/ Executive Officer of Municipality may determine on the basis of test results of the wastes that were provided to him or that were performed at his instance or behalf, that a recycled water plant is fulfilling the requirements and will issue permission in writing to put the plant on permanent to the occupier.

11.6.2. The occupier shall operate the plant as specified.

11.7 Separation of grey Water:

11.7.1. The wastes from toilets in the premises will be separated from grey water that is of bathroom and kitchen wastes by means of separate down take discharge system. The grey water shall be recycled by providing recycling plant and shall be reused for non-portable purposes after storing the same in distinctly separate tank by means of purple coloured down take pipes. The water quality shall conform to standards of non-portable water. The recycled water shall be tested once in six months and results shall be made available to President/ Executive Officer of Municipality Committee/ Council or his authorized officer whenever demanded.

The make-up connection to the system will be done at the collection tank of the treated water, through a free fall if from Municipal water connection, but preferable from a local source like bore well.

11.8 Conditional Waste Discharge Permission:

11.8.1. Waste discharge of the conditional type plant will be allowed on the issuance of conditional permission provided the conditional type plant has recycling and reuse of water facility and not exceeding limits given in as per Jammu &Kashmir Pollution Control Board(JKPCB) norms.

11.9 Mandatory notice regarding changes:

11.9.1. An occupier of premises shall inform the President/ Executive Officer of Municipality of any change in the quality, nature or quality of the wastes discharged from his plant or premises, the manner of their discharge or extra requirement of external supply of water in variation or violation of license under these byelaws.

11.10 Authority to change license/notice conditions:

11.10.1 The President/ Executive Officer of Municipality Committee/ Council or his authorized officer, having given a license or a notice in writing by the authority vested in him by this byelaw, may revoke, modify or stipulate conditions to the license or notice if not satisfied on inception of the plant, premises or test reports.

11.11 Delivery of Notice/Permission.

11.12.1 Notice/permission required by this byelaw shall be deemed to have been delivered lawfully if it is given in to the hand of their intended receiver with acknowledgement, or delivered to his place or residence or his place of occupation or place known to be so with acknowledgement, or to adult member of his family or to an adult employee with acknowledgement, or if sent by registered mail to the same person according to his place of residence, of normal place of employment recently known to be so. If it is not possible to make the delivery as stated, the notice will be assumed to have been delivered lawfully if the notice is pasted in a conspicuous place in one of the above stated locations.

11.12 Corrective action

11.12.1. Any person violating the provisions of these byelaws shall be fined Rs.`5000/- only on the day of detection and if the violation continues shall be fined Rs.`100/- only for every day as a corrective action after a written notice from the President/ Executive Officer of Municipal Committee/ Councility or his authorized officer is delivered to him.

11.12.2. Failure to operate (as determined by the Inspector or authorized officer of MC Municipality from the observations of test results and/or physical verification) the recycling plant will attract a penalty of Rs.`500/- per day and/or disconnection of water connection.

11.13 Authorization of Officers

11.14.1. President/ Executive Officer of Municipal Committee/ Council Municipality will authorize his officers/inspectors and will delegate the necessary powers for carrying various duties under this byelaw.

(Source: ISO 5667-3.)

Chapter - 12

CLIMATE RESILIENT CONSTRUCTION – INTEGRATION OF ENVIRONMENTAL CLEARANCE WITH SANCTION

Land, Air, Noise, Water, Energy, biological/ socio-economic/ solid / other waste management are the main facets considered in relation to Pre, during and Post. Building Construction for Sustainable Environment Management. Therefore, it is necessary for the building process to ensure compliance to various conditions laid down by the Ministry of Environment, Forest and Climate Change.

The building construction sector is a major contributor towards carbon footprints which affects climate change. India is committed towards mitigating the effects of climate change and moving towards internationally accepted norms for environmental friendly building construction. Currently this objective of environmental safeguard is achieved through obtaining a specific environmental clearance (EC) for any construction project having a size of more than 20,000 sq mts. This is administered under notification of Ministry of Environment, Forest and Climate Change.

With rapid urbanisation and growth of Indian economy, it is anticipated that the construction activity will experience a proportionate growth. Government is also committed towards streamlining of clearances for buildings and real estate sector and empowering the urban local bodies with an objective of Ease of Doing Business.

12.1 Environmental conditions for compliance during Building approvals

The Ministry of Environment, Forest and Climate Change has now decided to integrate the environmental concerns into building plan approval process and empowering the concerned local body/development authority to approve and certify compliance of stipulated requirements. The new building construction proposals are classified in the following 3 categories:-

1) Conditions for Category 'A' Buildings: Built-up Area 5000 sqmt – 20000 sqmt
2) Conditions for Category 'B' Buildings: Built-up Area 20000 sqmt – 50000 sqmt
3) Conditions for Category 'C' Buildings: Built-up Area 50000sqmt – 150000 sqmt

States are, therefore, advised to amend their building by-laws by incorporating the setof conditions for each category A, B and C as mentioned above either for the entire State/UT or clearly identified part thereof, where they would like to integrate the environmental clearance conditions with building permissions and empower the local authority to examine, stipulate and ensure compliance of conditions required to address environmental concerns. The State/UT

should submit such proposal/notification at draft stage as well as a copy of the final notification to the M/oEnvironment, Forest and Climate Change.

i. For building plans with a total built-up area between 5,000 sqm and 1, 50,000 sqm, and environment clearance will be required to be synchronized with the building regulations.

ii. The concerned Urban local body, authorized to sanction building plans, shall ensure at the time of sanctioning a building plan that the environmental requirements stipulated in Table 12.1 (for above 5,000 sqm and up to 20,000 sqm), Table 12.2 (for above 20,000 sqm and up to 50,000 sqm) and Table 12.3 (for above 50,000 sqm and up to 1,50,000 sqm), as the case may be, are complied with.

Table 12.1: Environmental Conditions for Building and Constructions
(Category "A" 5000 sqmt-20000 sqmt)

S. No.	Medium	Environmental conditions	MBBL Ref. Clause
1	Natural Drainage	The inlet and outlet point of natural drain system should be maintained with adequate size of channel for ensuring unrestricted flow of water.	_
2	Water conservations-Rain Water Harvesting and Ground Water Recharge	A rain water harvesting plan needs to be designed where the recharge bores (minimum one per 5000 sqm of built-up area) shall be provided. The rain water harvested should be stored in a tank for reuse in household through a provision of separate water tank and pipeline to avoid mixing with potable municipal water supply. The excess rain water harvested be linked to the tube well bore in the premises through a pipeline after filtration in the installed filters.	**Table 9.1**
2 (a)		The unpaved area shall be more than or equal to 20% of the recreational open spaces.	**10.2.1 (iv)**
3	Solid Waste Management	Separate wet and dry bins must be provided at the ground level for facilitating segregation of waste.	**10.2.5 (b)**
4	Energy	In common areas, LED/solar lights must be provided.	**10.2 (3)**
5	Air Quality and Noise	Dust, smoke and debris prevention measures such as screens, barricading shall be installed at the site during construction. Plastic/tarpaulin sheet covers must be used for trucks brining in sand and material at the site.	_
5(a)		The exhaust pipe of the DG set, if installed, must be minimum 10m away from the building. In case it is less	__

		than 10m away, the exhaust pipe shall be taken up to 3 m above the building.	
6	Green Cover	A minimum of 1 tree for every 80 sqm of land shall be planted and maintained. The existing trees will be counted for this purpose. Preference should be given to planting native species.	**10.2.1 (i)**
6(a)		Where the trees need to be cut, compensatory plantation in the ratio of 1:3 (i.e. planting of 3 trees for every 1 tree that is cut) shall be done with the obligation to provide continued maintenance for such plantations.	**10.2.1 (ii)**

Table 12.2: Environmental Conditions for Building and Constructions (Category "B" 20000 sqmt-50000 sqmt)

S. No.	Medium	Environmental conditions	MBBL Ref. Clause
1	Natural Drainage	The inlet and outlet point of natural drain system should be maintained with adequate size of channel for ensuring unrestricted flow of water.	_
2	Water conservations - Rain Water Harvesting and Ground Water Recharge	A rain water harvesting plan needs to be designed where the recharge bores (minimum one per 5000 sqm of built-up area) shall be provided. The rain water harvested should be stored in a tank for reuse in household through a provision of separate water tank and pipeline to avoid mixing with potable municipal water supply. The excess rain water harvested be linked to the tube well bore in the premises through a pipeline after filtration in the installed filters.	**Table 9.1**
2 (a)		The unpaved area shall be more than or equal to 20% of the recreational open spaces.	**10.2.1 (iv)**
3	Solid Waste Management	Separate wet and dry bins must be provided at the ground level for facilitating segregation of waste.	**10.2.5 (b)**
4	Energy	In common areas, LED/solar lights must be provided.	**10.2 (3)**
4(a)		At least 1% of connected applied load generated from renewable energy source such as photovoltaic cells or wind mills or hybrid should be provided.	**10.2**
4(b)		As per the provisions of the Ministry Of New and Renewable energy solar water heater of minimum capacity 10 litres/4 persons (2.5 litres per capita) shall	**1-2.4-IV**

		be installed.	
4(c)		Use of fly ash bricks: Fly ash should be used as building material in the construction as per the provisions of Fly Ash Notification of September, 1999 and as amended from time to time.	**10.2.6 (b)**
5	Air Quality and Noise	Dust, smoke and debris prevention measures such as screens, barricading shall be installed at the site during construction. Plastic/tarpaulin sheet covers must be used for trucks brining in sand and material at the site.	_
5(a)		The exhaust pipe of the DG set, if installed, must be minimum 10m away from the building. In case it is less than 10m away, the exhaust pipe shall be taken up to 3 m above the building.	__
6	Green Cover	A minimum of 1 tree for every 80 sqm of land shall be planted and maintained. The existing trees will be counted for this purpose. Preference should be given to planting native species.	**10.2.1 (i)**
6(a)		Where the trees need to be cut, compensatory plantation in the ratio of 1:3 (i.e. planting of 3 trees for every 1 tree that is cut) shall be done with the obligation to provide continued maintenance for such plantations.	**10.2.1 (ii)**

Table 12.3: Environmental Conditions for Building and Constructions
(Category "C" 50000 sqmt-150000 sqmt)

S. No.	Medium	Environmental conditions	MBBL Ref. Clause
1	Natural Drainage	The inlet and outlet point of natural drain system should be maintained with adequate size of channel for ensuring unrestricted flow of water.	_
2	Water conservations-Rain Water Harvesting and Ground Water Recharge	A rain water harvesting plan needs to be designed where the recharge bores (minimum one per 5000 sqm of built-up area) shall be provided. The rain water harvested should be stored in a tank for reuse in household through a provision of	**Table 9.1**

		separate water tank and pipeline to avoid mixing with potable municipal water supply. The excess rain water harvested is to be linked to the tube well bore in the premises through a pipeline after filtration in the installed filters.	
2 (a)		The unpaved area shall be more than or equal to 20% of the recreational open spaces.	**10.2.1 (iv)**
2(b)		The ground water shall not be withdrawn without approval from the competent authority.	
2(c)		Use of potable water in construction should be minimized.	
2(d)		Low flow fixtures and sensors must be used to promote water conservation.	
2(e)		Separation of grey and black water should be done by the use of dual plumbing system.	
3	Solid Waste Management	Separate wet and dry bins must be provided at the ground level for facilitating segregation of waste.	**10.2.5 (b)**
3(a)		All non-biodegradable waste shall be handed over to authorized recyclers which a written tie-up must be done with the authorized recyclers.	
3(b)		Organic waste composter/vermin culture pit with a minimum capacity of 0.3 kg/tenement/day must be installed wherein the STP sludge may be use3d to be converted to manure which could be used at the site or handed over to authorized recyclers for which a written tie-up must be done with the authorized recyclers.	
4	Energy	In common areas, LED/solar lights must be provided.	**10.2 (c)**
4(a)		At least 1% of connected applied load generated from renewable energy source such as photovoltaic cells or wind mills or	**10.2**

		hybrid should be provided.	
4(b)		As per the provisions of the Ministry of New and Renewable energy solar water heater of minimum capacity 10 litres/4 persons (2.5 litres per capita) shall be installed.	**1-2.4-IV**
4(c)		Use of fly ash bricks: Fly ash should be used as building material in the construction as per the provisions of Fly Ash Notification of September, 1999 and as amended from time to time.	**10.2.6 (b)**
4(d)		Use of concept of passive solar design of buildings using architectural design approaches that minimize energy consumption in buildings by integrating conventional energy-efficient devices, such as mechanical and electric pumps, fans, lighting fixtures and other equipment, with the passive design elements, such as building orientation, landscaping, efficient building envelope, appropriate fenestration, increased day lighting design and thermal mass.	**10.2(3)**
4(e)		Optimize use of energy systems in buildings that should maintain a specific indoor environment conducive to the functional requirements of the building by following mandatory compliance measures (for all applicable buildings) as recommended in the Energy Conservation Building Code (ECBC) 2007 of the Bureau of Energy Efficiency, Government of India.	**10.2 (3)**
5	Air Quality and Noise	Dust, smoke and debris prevention measures such as screens, barricading shall be installed at the site during construction. Plastic/tarpaulin sheet covers must be used for trucks brining in sand and material at the site.	_
5(a)		The exhaust pipe of the DG set, if installed, must be minimum 10m away from the building. In case it is less than 10m away,	__

		the exhaust pipe shall be taken up to 3 m above the building.	
6	Green Cover	A minimum of 1 tree for every 80 sqm of land shall be planted and maintained. The existing trees will be counted for this purpose. Preference should be given to planting native species.	**10.2.1 (i)**
6(a)		Where the trees need to be cut, compensatory plantation in the ratio of 1:3 (i.e. planting of 3 trees for every 1 tree that is cut) shall be done with the obligation to provide continued maintenance for such plantations.	**10.2.1 (ii)**
7	Sewage Treatment Plant	Sewage treatment plant with capacity of treating 100% waste water shall be installed. Treated water must be recycled for gardening and flushing.	**4.32.4**
8	Environment Management Plan	The environment infrastructure like Sewage Treatment Plant, Landscaping, Rain Water Harvesting, Power backup for environment, infrastructure, Environment Monitoring, Solid Waste Management and Solar and Energy conservation, should be kept operational through Environment Monitoring Committee with defined functions and responsibility.	—

(Source: Model Building Bye-Laws 2016, Town and Country Planning Organisation, Ministry of Urban Development.)

Chapter - 13

GENERAL REFERENCES

13.1 Facilities for physically handicapped persons

For requirements regarding Facilities for Physically Handicapped Persons, reference shall be made to part 3 Development Control Rules and General Building Requirements of the **National Building Code 2016** or its latest version which shall apply.

13.2 Fire and Life Safety

For requirements regarding Fire and Life Safety for different Occupancies, reference shall be made to part 4 Fire and Life Safety of the **National Building Code 2016** or its latest version.

13.3 Design and Construction

For requirements regarding structural design, reference shall be made to part 6 Structural design of the National Building Code. For requirements regarding construction (including management and safety), reference shall be made to part 7 Construction Management, Practices and safety 'of the **National Building Code 2016** or its latest version.

13.4 Building services

13.4.1 Lighting and Ventilation

For requirements regarding Lighting and ventilations for different uses and occupancies reference shall be made to part 8 "Building Services", Section 1 "Lighting and Natural Ventilation" of the **National Building Code 2016** or its latest version.

13.4.2 Electrical and Allied Installations (Including Lighting Protection of Buildings and Solar Energy Utilization)

For requirements regarding Electrical Installations in Buildings Including Lighting Protection of Buildings reference shall be made to part 8 "Building Services" Section 2 Electrical and Allied Installations of the **National Building Code 2016** or its latest version.

13.4.3 Air Conditioning, Heating and Mechanical ventilation

For requirements regarding design, construction and installation of Air Conditioning, Heating and Mechanical ventilation systems, reference shall be made to part 8 "Building Services" Section 3 Air Conditioning, Heating and Mechanical ventilation of the National Building Code 2016 or its latest version.

13.4.4 Acoustics, Sound Insulation and Noise Control

For requirements regarding the desired Noise levels and sound Insulation in different occupancies reference shall be made to part 8 "Building Services" Section 4 Acoustics, Sound Insulation and Noise Control of the **National Building Code 2016** or its latest version.

13.4.5 Installation of Lifts Escalators and Moving Walks

Provision for Lifts shall be made for buildings 15m or more in height. For requirements regarding planning, designing and installation etc. of Lifts Escalators, reference shall be made to part 8 "Building Services" Section 5 Installation of Lifts Escalators and Moving Walks of the **National Building Code 2016** or its latest version.

13.4.6 Information and Communication Enabled Installations

For requirements regarding Information and Communication Enabled Installations in Buildings reference shall be made to part 8 "Building Services" Section 6 Information and Communication Enabled Installations of the **National Building Code 2016** or its latest version.

13.5 Plumbing Services (Including Solid Waste Management)

For requirements regarding water supply, drainage and Sanitation, Solid Waste Management and gas supply reference shall be made to part 9 "Plumbing Services (Including Solid Waste Management)" of the National Building Code 2016 or its latest version.

13.6 Landscape Development

For requirements regarding Landscape development, reference shall be made to part 10 'Landscape Development and Sign and outdoor display structures' Section 1 Landscape Planning and development of the **National Building Code 2016** or its latest version.

13.7 Sign and outdoor display structures

No advertising signs (including hoarding) on buildings or on land shall be displayed without the prior approval of the Authority. The standards specified in Section-2 of part 10 Signs and outdoor display structures of **National Building Code 2016** or its latest version.

13.8 Sustainability

For requirements regarding sustainable buildings and built environment, reference shall be made to part 11 'Approach to Sustainability' of the **National Building Code 2016** or its latest version.

13.9 Asset and Facility Management

For requirements regarding Asset and Facility Management in respect of Existing Buildings and services thereof, reference shall be made to part 12 Asset and Facility Management of the **National Building Code 2016** or its latest version.

13.10 Energy Conservation Building

For requirements regarding Energy Conservation Building guidelines reference shall be made to **Energy Conservation Building Code 2017** or its latest version & the J&K UT ECBC whenever framed.

***Note**: Whenever an Indian Standard including those referred in the National Building Code or the National Building Code is referred; the latest revision of the same shall be followed except specific criteria, if any, mentioned above against that code.*

ANNEXURES
AND
APPENDICES

Annexures and Appendices

Annexure: "A"

OCCUPANCY CATEGORIZATION OF BUILDINGS FOR WATER AND OTHER REQUIREMENT FOR FIRE FIGHTING

Level-I	**Level-II**	**Level-III**
A1 Lodging and Rooming Houses A2 One or two family private dwelling A3 Dormitories A4 Apartment Houses	Hotels	F2 Shops and stores, etc. above500 sq.mt. floor area F3 Underground shopping centers
Group "B" Educational B1 Schools up to higher secondary level.		
GROUP "C" INSTITUTIONAL C1Hospital & Sanitoria (upto 100 beds) C2Custodial Institutions C3 Penal & mental Institutions	GROUP"D" ASSEMBLY BUILDINGS D1 For more than 1000 persons with permanent stage andfixed seats D2 For less than 1000 persons with permanent stage andfixed seats	GROUP"H" STORAGE BUILDINGS
GROUP"D" ASSEMBLY BUILDINGS D3 Upto 300 persons withoutpermanent stage and fixedseats D4 Above 300 persons without permanent stage &fixedseats	GROUP"E" BUSINESS BUILDINGS E1 Offices, Banks, etc. E2 Laboratories, Libraries, etc. E3 Telephone Exchanges	
GROUP "E" BUSINESS E3 Computer Installations E5 Broadcasting stations	GROUP "F" MERCANTILE F1 Shops, Stores, etc. upto 500 m^2 floor area	
GROUP "G" INDUSTRIAL G1 Low hazard Industries	GROUP "G" INDUSTRIAL	

Annexure: "B"

1. **Water Requirement Criterion**: Unless otherwise specified: Water requirement for fighting in different categories of occupancies shall be based on following.

Occupancy Category	**Sprinkler Design Discharge Density (lt./min/sg.mt)**	**Sprinkler Design Are (sq.mt)**	**Max. Area coverage/ Sprinkler (sq.mt.)**	**No. of Hose streams* Fully other Sprinkled**	**Duration of Discharge (min.) Fully Wet Riser Sprinkled**	
Level-I	02.5	084	21	2 4	45	45
Level-II	05.0	360	12	3 6	60	90
Level-III	10.0	225	09	3 6	90	90
Note: *The discharge through a standard hose stream shall be taken as 567 lt./min.*						

2. **Estimation of Total Water Requirements Fully Sprinklered Buildings**:

Occupancy Category	**Sprinkler (lt.)**	**Riser (lt.)**	**Total lt.)**	**Wet Rise cum Down Comer lt.)**
Level-I	9,450	51,030	60,480 (60,000)	1,02,060 (1,00,000)
Level-II	1,08,000	1,02,060	2,10,060 (2,00,000)	2,04,120 (2,00,000)
Level-III	2,02,500	1,02,060	3,04,560 (3,00,000)	3,06,180 (3,00,000)

3. **Water Storage Tanks**

    1. The design of the water storage tanks shall be as laid down in National Building Code of India.
    2. The capacity of underground water storage tank shall not be more than 85% of the total water requirement.
    3. The capacity of overhead tank shall not be less than 15% of the total water requirement.
    4. The entire water requirement can be provided in overhead tanks and pumping requirements shall be finalized in consultation with Fire Services, Department.

    Under ground water storage tank shall not be provided in the set back areas.

Storage Requirements:

Occupancy Category	Under Ground Static Tank		Over Head Tank	
	Fully Spkd. (lt.)	Riser (lt.)	Fully Spkd. (lt.)	Riser (lt.)
Level-I	50,000	85,000	10,000	15,000
Level-II	1,70,000	1,70,000	30,000	30,000
Level-III	2,50,000	2,50,000	50,000	50,000

4. **Riser / Downcomer**

1. The size of the riser/ downcomer shall be such that velocity of flow does not exceed 5 m/second subject to a minimum of 100 mm. diameter.
2. The number of riser/downcomer shall be calculated on the basis that if 30 mt. of delivery hose is laid, it reaches the farthest comer of the remotest compartment on the floor.
3. The riser/downcomer shall be provided in the staircase/staircase lobby in such a manner that it does not obstruct the means of escape.
4. Only single headed hydrants shall be used on the riser/downcomer.
5. The size of hose to be provided with the internal hydrants shall be 50 mm diameter and with 63 mm diameter instantaneous male/female couplings.
6. Diffuser branch shall only be provided in the hose boxes.
7. In case of partially sprinklered building tapping from the wet riser is permitted for sprinkler feed.

In case of fully sprinklered building separate rising mains and pumps shall be used for sprinkler system and wet riser.

5. **Selection of Pumps:**

1. Pumping requirement shall be met by a single pump or combination of pumps.
2. If more than one pumps are installed to meet the pumping requirement they shall be so arranged that they come into operation one after another depending upon fall in pressure in the mains and the combined pumping capacity shall be 20% more than the actual pumping capacity needed.

3. Jockey pump shall be selected to give minimum 3% and maximum 5% of aggregate pumping requirement at the same pressure to that of the main pump subject to maximum discharge of 450 Litre Per Minute (LPM).

4. Standard pumps shall only be used having discharge capacity as 1800 LPM, 2280 LPM 2850 LPM & 4550 LPM.

5. The pump shall be capable of giving the pressure as shown in the table below:

Occupancy	**Pressure* At Terrace Level**	
	Fully Spkd. (Kgf./Cm	**Rier(Kgf./Cm^2)**
Level-I	3.5	3.5
Level-II	3.5	5.5
Level-III	5.5	7.0

**Orifice plates shall be installed at the hydrants on rising mains / yard hydrants to ensure that the pressure does not exceed 7 Kgf. / Cm^2.*

Annexures and Appendices

Appendix -A

(*To be submitted in duplicate*)

Form for Application to Erect, Re-Erect or to make Material Alteration in any Place in a Building

To
President/Executive Officer,
Municipal Council/Committee

_____

Sir,

I hereby give notice on behalf of Shri…….…… (owner) that the owner intends to erect/demolish or make alteration in the building number or to on/in Plot No……..……Ward No……..… House No …….. Situated at …… Scheme ……... and in accordance with the building Bye-laws No…… and I forward herewith, the following plans and specification duly signed by me and by the owner.

1. Site plan
2. Building Plan
3. Service Plan
4. Parking and circulation plan.
5. Landscape Plan
6. General Specifications (in attached form)
7. Ownership Title (Lease/Conveyance/Sale Deed, etc)
8. Other document, as required

ii) The building plan has been prepared strictly as per the approved building Byelaws. The construction shall be carried out in accordance with the building plan and I shall be completely accountable for any lapse on my part up to within 6 months after obtaining completion certificate of the building.

iii) The Building permit fee as required under bye-laws has been deposited vide receipt No ……dated. ……..…… (Photocopy enclosed).

iv) I am aware that in the event of building being constructed in violation of the sanctioned building plan approval, the Authority shall have the right to take action against me as it may deem fit including referring the matter to Council of Architecture for taking disciplinary action against me.

…….

Signature of the Owners

Name of owner(s)…….

Address of the owner(s)……

Encl: As stated above Dated……

Annexures and Appendices

Appendix - A-1

FORM FOR SUPERVISION

To
The President/Executive Officer,
Municipal Council/Committee,

_____

Sir,

I hereby certify that erection/re-erection demolition or material alteration in / of Building No……on / in …… Plot No……in Ward No…… situated at …… scheme……..… shall be carried out under my supervision and I certify that all the materials (type & Grade) and workmanship of the work shall be generally in accordance with the general specification submitted along with and the work shall be carried out according to the sanctioned planswhich also included the services like drainage, sanitary, water supply, and electrical.

Signature of Registered Architect Engineer/Supervisor
……..
Name of Registered Architect/Engineer/Supervisor (In block letters)……..……

Registration No. of Architect/Engineer/Supervisor.
……..
Address of Registered Architect/Engineer/Supervisor
……..……..

Dated: ……

Annexures and Appendices

Appendix - A-2

UNDERTAKING FOR PAYMENT OF OTHER AND PERIPHERAL CHARGES

Note: *It should be on non-judicial stamp paper of specified amount attested by Notary Public / First class Magistrate*.

UNDERTAKING

I ……..…… Son of Shri ……..…… aged…..…… Years residents of ……..…… Owner of Plot No…….. Ward No. ……. hereby undertake to pay the balance of peripheral and other charges as and when required by the concerned Authority and in this regard Authority's decision will be finally binding on me.

Executed by me as…….. On day of…….. 20…...

…….

Executant

Witness:

1……

2……

Appendix - A-3

AFFIDAVIT-CUM-UNDERTAKING

(Affidavit of Architect on `5/- Non-Judicial Stamp paper of specified amount to be attested by Notary Public/Metropolitan Magistrate)

I ……. son of ……Architect by profession having office at…… do hereby solemnly affirm and declare as under:

1. That I am a Licensed Architect/Engineer/Supervisor/Plumber duly registered with the Authority vide registration no. ……..……..……

   Or

   That I am an Architect by profession and duly registered with the Council of Architecture vide Registration No……..…
2. That I have been engaged as an Architect for preparing the building plans and to supervise construction in respect of Plot No……..Ward No…..…… situated at……..
3. That I have prepared the building plans in respect of the aforesaid plot.
4. That I have studied the layout plan of the colony and gone through the instructions, policy decisions and other relevant documents in respect of the plot and colony.
5. That I have personally inspected the site. The plot under proposal forms part of the approved layout plan with respect to its location, size shape and area of the plot and proposed land use is also in conformity with the approved layout plan. The plot has been demarcated at site and the size, shape and area of plot available at site tallies with the approved layout plan.
6. That the ownership documents are in the shape of registered sale-deed/lease-deed in favour of the applicants and have been thoroughly examined and the ownership in favour of the applicant is in order.
7. That there is no construction in existence at the plot and no construction shall be started before sanction of the building plans.

That there is no encroachment on the Municipal land/road/other property and road widths as shown in the layout plan are available at site.

8. That the proposal are in conformity with the terms and condition of lease deed which is still valid and period of construction as per lease-deed and the extension granted by the lessor is valid up to…….

9. That the proposal have been prepared strictly in accordance with the Building Bye-laws rules regulation and practice of the department and no misinterpretation on inference of provision of Building Bye-Law has been done while preparing the plans. The construction shall be carried out strictly in accordance with the sanctioned building plans and in case any deviation is carried out, I shall inform the concerned Authority within 48 hours.

10. That in case the owner dispenses with my services at any stage whatsoever, I shall inform the concerned Authority within 48 hours.

11. That mandatory setbacks have been proposed and shall be maintained in accordance with the setbacks marked in the layout plan.

12. That before submission of the proposal, necessary information/clarification have been obtained from the concerned department of the concerned Authority. The plot is safe and is not affected in any scheme or the road widening. Building activities for residential use are allowed with number of storeys as per approved layout plan.

13. That no development/additional development/deficiency charges are payable, against this plot (in case development/additional development/deficiency charges are payable then its details be given in the separate para).

14. That no non-compoundable deviations shall be carried out during the course of construction.

15. That nothing has been concealed and no misrepresentation has been made while preparing and submitting the building plans.

16. That in case anything contrary to the above is found or established at any stage, the concerned Authority shall be at liberty to take any action as it may deem fit including revocation of sanction of building plans and debarring me for submission of building plans with the Authority under the scheme and also lodge a complaint with the Council of Architecture for appropriate action.

Deponent

Verification:

I the above named deponent do hereby verify at ……..……on this…… of …….. 20…… that contents of the above affidavit are true and correct to my knowledge. No part of it is false and nothing has been concealed there from.

Deponent

Appendix: A-4

BUILDING PERMIT

File No……
Dated……..

To,

_____
_____

Subject: Sanction u/s……

Dear Sir or Madam,

With reference to your application dated…….. For the grant of sanction to erect/re-erect/add to/alteration in the building to carry out the development specified in the said application relating to Plot No…… Ward No…….. Situatedin/at…… I have to state that the Authority subject to the following conditions and corrections done in the plans has sanctioned the same on……..

1. The plans are valid up to…… day……..…… Months…….. Year ……
2. The construction will be undertaken as per sanctioned plan only and no deviation from the bye-laws will be permitted without prior sanction. Any deviation done against the bye-laws is liable to be demolished and the supervising Architect engaged on the job will run the risk of being black listed.
3. Violation of building bye-laws will not be compounded.
4. It will be the duty of the owner of the plot and the Architect preparing the plans to ensure that the sanctioned plans are as per prevalent Master Plan/Zonal Plan/Building Bye-laws. If any infringement of bye-laws remain unnoticed, the concerned Authority reserves the right to amend the plans as and when infringement come to the notice and concerned Authority will stand indemnified against any claim on this account.

Annexures and Appendices

5. A notice in writing shall be sent to Authority before commencement of the constructions of the building as per bye-laws. Similar notice will be sent to Authority when the building has reached up to plinth level.

6. The owner shall not occupy or permit to occupy the building or use or permit to use the building or any part thereof affected by any such work until occupancy certificate is issued by the concerned Authority.

7. Concerned Authority will stand indemnified and kept harmless from all proceedings in court and before other authorities of all expenses /claims which the concerned Authority may incur or become liable to pay as a result or in consequences of the sanction accorded by it to these building plans.

8. The doors and window leaves shall be fixed in such a way that they shall not, when open project on any street.

9. The owner will not convert the house into more dwelling units on each floor than the sanctioned.

10. The building shall not be constructed within minimum distance as specified in Electricity Rules from voltage lines running on side of the site.

11. The land left open as a consequence of the enforcement of the setback rule shall form part of the public street.

12. The sanction will be void if auxiliary conditions mentioned above and other conditions whatsoever imposed are not complied.

13. The owner will use the premises for the use, which has been sanctioned.

14. The owner will not proceed with the construction without having the supervision of an Architect/Engineer as the case may be. If he/she changes his Architect/Engineer, he/she shall inform the Authority about the appointment of new Architect/Engineer within 48 hours, with a proper certificate from him.

Yours faithfully,

For ……

Encl: A set of sanctioned plan.

Appendix: A-5

FORM FOR REFUSAL OF BUILDING PERMIT

To,

_____

_____

File No……. Dated:
…….

Sir,

With reference to your application No……. dated…….. for the grant of sanction for the erection of building/execution of work in House No……Plot No……..Ward No……
Scheme…… Situated at …… I have you inform you that building permit under relevant provisions of the Act of…….. Hasbeen refused on…… on the following grounds.

2
3
4
5

Yours faithfully,

For……..
Authority

Appendix A-6

FORM OF REVALIDATION

File No……. Dated……..…….

Shri /Madam ……..……

……..……

……..……

Subject: Revalidation of Building Plans relating to plot No…… Ward No…… Scheme…….

Dear Sir / Madam,

1. With reference to your application dated…….. On the subject cited above, I am directed to inform you that your building plan which were sanctioned on……. vide file No…….. Have been revalidated up to ……..
2. Original sanctioned plan submitted by you is also returned herewith.
3 Please acknowledge receipt.

Yours Faithfully,

For……
Authority

Encl: As above.

Appendix: "B"

AFFIDAVIT/UNDERTAKING

(For Handing Over Land Required For Road Widening)

That I/We have submitted building plans for construction of building on plot No……. Ward No…… located at …… to the…….. Under Sanction …… of the …….. Act for favour of sanction.

I/We undertake to hand over the land required for road widening as shown on site plan to concerned Authority free of cost as and when asked by…….……to do so.

I/We have already understood that the……is granting sanction on the basis of my undertaking.

If I/We fail to do so, the sanction so accorded shall be revoked and construction done as consequence thereof shall be deemed to have done unauthorisedly and shall be actionable u/s …….. Of the ……. Act.

DEPONENT

Verification

I/We verify that the contents of the above undertaking are correct to the best of my knowledge and belief and nothing material has been concealed there from.

DEPONENT

Appendix -"C"

PROFORMA TO BE SUBMITTED BY OWNER

1. Name, Status, and Address of the applicant
2. Name of the Architect with address with Registration number with Council of Architecture under the Architects Act, 1972.
3. Details of the property/plot
   a) Location
   b) Boundaries
   c) Area in sq.mt. With dimensions (net plot area)
   d) Width of the roads
4. Land use
   a) Master Plan
   b) Zonal Development Plan
   c) Approved Layout Plan
5. Title
   a) Free Hold
   b) Leasehold under notification for acquisition if lease hold permission of lessor For construction under the leasehold condition obtained.
   c) Whether under acquisition, if so give details.
6. Proposals
   a) Land Use
   b) Coverage on each floor with proposed use of the floor space including basement.
   c) FAR
   d) Height
   e) No. of floors

Annexures and Appendices

f) Envelope controls/set backs

g) Parking norms

Encls:

1. Ownership title
2. Permission to construct under the lease
3. Permission under the Land Ceiling Act, 1976.
4. Site/Location Plan
5. Tentative proposals to explain the scheme

Signature of the Architect

Name……..

Reg. No……

Address……

Signature of the owner

Name……..

Address……

……